

Additional File 1 - Proteins encoded by 234 CVD related genes – core network. Proteins encoded by cardiovascular disease related genes were collected manually from literature and databases. A total number of 234 genes were found to be associated with the disease, which forms the basis of our network. Genes are represented along with the GeneIDs, String and UniProt identifiers, names and the source.

Symbol	GeneID	StringID	UniProtID	GeneName	Ref
ABCA1	19	ENSP00000297693	O95477	ATP-binding cassette, sub-family A (ABC1), member 1 [Homo sapiens]	[1]
ABCC6	368	ENSP00000205557	O95255	ATP-binding cassette, sub-family C (CFTR/MRP), member 6 [Homo sapiens]	[2]
ACE	1636	ENSP00000290866	P12821	angiotensin I converting enzyme (peptidyl-dipeptidase A) 1 [Homo sapiens]	[3]
ADD1	118	ENSP00000264758	P35611	adducin 1 (alpha) [Homo sapiens]	[4]
ADIPOQ	9370	ENSP00000320709	Q15848	adiponectin, C1Q and collagen domain containing [Homo sapiens]	[5]
ADIPOR1	51094	ENSP00000341785	Q96A54	adiponectin receptor 1 [Homo sapiens]	[6]
ADM	133	ENSP00000278175	P35318	adrenomedullin [Homo sapiens]	[7]
ADRB1	153	ENSP00000046967	P08588	adrenergic, beta-1-, receptor [Homo sapiens]	[8]
ADRB2	154	ENSP00000305372	P07550	adrenergic, beta-2-, receptor, surface [Homo sapiens]	[9]
ADRB3	155	ENSP00000343782	P13945	adrenergic, beta-3-, receptor [Homo sapiens]	[9]
AGER	177	ENSP00000325323	Q15109	advanced glycosylation end product-specific receptor [Homo sapiens]	[10]
AGT	183	ENSP00000258224	P01019	angiotensinogen (serpin peptidase inhibitor, clade A, member 8) [Homo sapiens]	[9]
AGTR1	185	ENSP00000273430	P30556	angiotensin II receptor, type 1 [Homo sapiens]	[11]
ANGPT2	285	ENSP00000314897	O15123	angiopoietin 2 [Homo sapiens]	[12]
APCS	325	ENSP00000255040	P02743	amyloid P component, serum [Homo sapiens]	[13]
APOA1	335	ENSP00000236850	P02647	apolipoprotein A-I [Homo sapiens]	[14]
APOA4	337	ENSP00000350425	P06727	apolipoprotein A-IV [Homo sapiens]	[9]
APOA5	116519	ENSP00000227665	Q6Q788	apolipoprotein A-V [Homo sapiens]	[15]
APOB	338	ENSP00000233242	P04114	apolipoprotein B (including Ag(x) antigen) [Homo sapiens]	[9]
APOE	348	ENSP00000252486	P02649	apolipoprotein E [Homo sapiens]	[9]
BBS4	585	ENSP00000268057	Q96RK4	Bardet-Biedl syndrome 4 [Homo sapiens]	[16]
BCHE	590	ENSP00000264381	P06276	butyrylcholinesterase [Homo sapiens]	[17]
CASR	846	ENSP00000353556	P41180	calcium-sensing receptor (hypocalciuric hypercalcemia 1, severe neonatal hyperpa	[18]
CBS	875	ENSP00000344460	P35520	cystathionine-beta-synthase [Homo sapiens]	[19]

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CCL11	6356	ENSP00000264613	P51671	chemokine (C-C motif) ligand 11 [Homo sapiens]	[20]
CD36	948	ENSP00000353555	P16671	CD36 molecule (thrombospondin receptor) [Homo sapiens]	[8]
CD40	958	ENSP00000218368	P25942	CD40 molecule, TNF receptor superfamily member 5 [Homo sapiens]	[21]
CD40LG	959	ENSP00000218368	P29965	CD40 ligand (TNF superfamily, member 5, hyper-IgM syndrome) [Homo sapiens]	[22]
CD9	928	ENSP00000009180	P21926	CD9 molecule [Homo sapiens]	[21]
CETP	1071	ENSP00000200676	P11597	cholesteryl ester transfer protein, plasma [Homo sapiens]	[9]
CFH	3075	ENSP00000001567	P08603	complement factor H [Homo sapiens]	[23]
CMA1	1215	ENSP00000250378	P23946	chymase 1, mast cell [Homo sapiens]	[21]
COL3A1	1281	ENSP00000304408	P02461	collagen, type III, alpha 1 (Ehlers-Danlos syndrome type IV, autosomal dominant)	[24]
CP	1356	ENSP00000264613	P00450	ceruloplasmin (ferroxidase) [Homo sapiens]	[25]
CPB2	1361	ENSP00000181383	Q96IY4	carboxypeptidase B2 (plasma) [Homo sapiens]	[26]
CRP	1401	ENSP00000319435	P02741	C-reactive protein, pentraxin-related [Homo sapiens]	[23]
CSF1	1435	ENSP00000327513	P09603	colony stimulating factor 1 (macrophage) [Homo sapiens]	[8]
CSF2	1437	ENSP00000296871	P04141	colony stimulating factor 2 (granulocyte-macrophage) [Homo sapiens]	[21]
CST3	1471	ENSP00000217421	P01034	cystatin C (amyloid angiopathy and cerebral hemorrhage) [Homo sapiens]	[27]
CX3CL1	6376	ENSP00000006053	P78423	chemokine (C-X3-C motif) ligand 1 [Homo sapiens]	[28]
CX3CR1	1524	ENSP00000351059	Q9NPB9	chemokine (C-X3-C motif) receptor 1 [Homo sapiens]	[28]
CXCL11	6373	ENSP00000306884	O14625	chemokine (C-X-C motif) ligand 11 [Homo sapiens]	[29]
CXCL16	58191	ENSP00000293778	Q9H2A7	chemokine (C-X-C motif) ligand 16 [Homo sapiens]	[30]
CYBA	1535	ENSP00000261623	P13498	cytochrome b-245, alpha polypeptide [Homo sapiens]	[31]
CYP11B2	1585	ENSP00000325822	P19099	cytochrome P450, family 11, subfamily B, polypeptide 2 [Homo sapiens]	[21]
CYP19A1	1588	ENSP00000260433	P11511	cytochrome P450, family 19, subfamily A, polypeptide 1 [Homo sapiens]	[21]
CYP1A1	1543	ENSP00000268062	P04798	cytochrome P450, family 1, subfamily A, polypeptide 1 [Homo sapiens]	[32]
CYP2J2	1573	ENSP00000257149	P51589	cytochrome P450, family 2, subfamily J, polypeptide 2 [Homo sapiens]	[33]
CYP3A4	1576	ENSP00000337915	P08684	cytochrome P450, family 3, subfamily A, polypeptide 4 [Homo sapiens]	[34]
DBH	1621	ENSP00000263611	P09172	dopamine beta-hydroxylase (dopamine beta-monooxygenase) [Homo sapiens]	[15]
DCP1A	55802	ENSP00000294241	Q9NPI6	DCP1 decapping enzyme homolog A (S. cerevisiae) [Homo sapiens]	[15]
DCP1B	196513	ENSP00000280665	Q8IZD4	DCP1 decapping enzyme homolog B (S. cerevisiae) [Homo sapiens]	[15]
DRD1	1812	ENSP00000327652	P21728	dopamine receptor D1 [Homo sapiens]	[15]

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ECE1	1889	ENSP00000264205	P42892	endothelin converting enzyme 1 [Homo sapiens]	[8]
EDN1	1906	ENSP00000075232	P05305	endothelin 1 [Homo sapiens]	[8]
EDN2	1907	ENSP00000247589	P20800	endothelin 2 [Homo sapiens]	[15]
EDNRA	1909	ENSP00000315011	P25101	endothelin receptor type A [Homo sapiens]	[8]
EDNRB	1910	ENSP00000343922	P24530	endothelin receptor type B [Homo sapiens]	[8]
EGR1	1958	ENSP00000239938	P18146	early growth response 1 [Homo sapiens]	[8]
ENPP1	5167	ENSP00000350964	P22413	ectonucleotide pyrophosphatase/phosphodiesterase 1 [Homo sapiens]	[35]
EPO	2056	ENSP00000252723	P01588	erythropoietin [Homo sapiens]	[36]
ESR1	2099	ENSP00000206249	P03372	estrogen receptor 1 [Homo sapiens]	[37]
F10	2159	ENSP00000246496	P00742	coagulation factor X [Homo sapiens]	[15]
F11	2160	ENSP00000264691	P03951	coagulation factor XI (plasma thromboplastin antecedent) [Homo sapiens]	[15]
F12	2161	ENSP00000253496	P00748	coagulation factor XII (Hageman factor) [Homo sapiens]	[15]
F13A1	2162	ENSP00000264870	P00488	coagulation factor XIII, A1 polypeptide [Homo sapiens]	[15]
F13B	2165	ENSP00000271509	P05160	coagulation factor XIII, B polypeptide [Homo sapiens]	[15]
F2	2147	ENSP00000308541	P00734	coagulation factor II (thrombin) [Homo sapiens]	[9]
F2R	2149	ENSP00000321326	P25116	coagulation factor II (thrombin) receptor [Homo sapiens]	[8]
F3	2152	ENSP00000334145	P13726	coagulation factor III (thromboplastin, tissue factor) [Homo sapiens]	[15]
F5	2153	ENSP00000354631	P12259	coagulation factor V (proaccelerin, labile factor) [Homo sapiens]	[9]
F7	2155	ENSP00000261967	P08709	coagulation factor VII (serum prothrombin conversion accelerator) [Homo sapiens]	[9]
F9	2158	ENSP00000218099	P00740	coagulation factor IX (plasma thromboplastic component, Christmas disease, hemophilia B) [Homo sapiens]	[15]
FABP2	2169	ENSP00000274024	P12104	fatty acid binding protein 2, intestinal [Homo sapiens]	[38]
FBLN5	10516	ENSP00000267620	Q9UBX5	fibulin 5 [Homo sapiens]	[21]
FBN1	2200	ENSP00000325527	P35555	fibrillin 1 [Homo sapiens]	[39]
FGA	2243	ENSP00000306361	P02671	fibrinogen alpha chain [Homo sapiens]	[21]
FGB	2244	ENSP00000306099	P02675	fibrinogen beta chain [Homo sapiens]	[9]
FGFR2	2263	ENSP00000350166	P21802	fibroblast growth factor receptor 2 [Homo sapiens]	[15]
FGG	2266	ENSP00000336829	P02679	fibrinogen gamma chain [Homo sapiens]	[8]
GALR1	2587	ENSP00000299727	P47211	galanin receptor 1 [Homo sapiens]	[15]
GATA2	2624	ENSP00000345681	P23769	GATA binding protein 2 [Homo sapiens]	[40]

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GCG	2641	ENSP00000233604	P01275	glucagon [Homo sapiens]	[15]
GCLM	2730	ENSP00000263891	P48507	glutamate-cysteine ligase, modifier subunit [Homo sapiens]	[41]
GH1	2688	ENSP00000312673	P01241	growth hormone 1 [Homo sapiens]	[42]
GIPR	2696	ENSP00000263281	P48546	gastric inhibitory polypeptide receptor [Homo sapiens]	[15]
GJA4	2701	ENSP00000343676	P35212	gap junction protein, alpha 4, 37kDa [Homo sapiens]	[43]
GNB3	2784	ENSP00000229264	P16520	guanine nucleotide binding protein (G protein), beta polypeptide 3 [Homo sapiens]	[9]
GP1BA	2811	ENSP00000329380	P07359	glycoprotein Ib (platelet), alpha polypeptide [Homo sapiens]	[15]
GPX3	2878	ENSP00000288332	P22352	glutathione peroxidase 3 (plasma) [Homo sapiens]	[44]
GSTM1	2944	ENSP00000311469	P09488	glutathione S-transferase M1 [Homo sapiens]	[45]
GSTT1	2952	ENSP00000248935	P30711	glutathione S-transferase theta 1 [Homo sapiens]	[45]
GYS1	2997	ENSP00000317904	P13807	glycogen synthase 1 (muscle) [Homo sapiens]	[15]
HBA1	3039	ENSP00000251595	P69905	hemoglobin, alpha 1 [Homo sapiens]	[46]
HBEGF	1839	ENSP00000230990	Q99075	heparin-binding EGF-like growth factor [Homo sapiens]	[21]
HFE	3077	ENSP00000311698	Q30201	hemochromatosis [Homo sapiens]	[47]
HGF	3082	ENSP00000222390	P14210	hepatocyte growth factor (hepapoietin A; scatter factor) [Homo sapiens]	[8]
HMOX1	3162	ENSP00000216117	P09601	heme oxygenase (decycling) 1 [Homo sapiens]	[48]
HP	3240	ENSP00000276297	P00738	haptoglobin [Homo sapiens]	[15]
HSD11B2	3291	ENSP00000316786	P80365	hydroxysteroid (11-beta) dehydrogenase 2 [Homo sapiens]	[15]
HSPD1	3329	ENSP00000340019	P10809	heat shock 60kDa protein 1 (chaperonin) [Homo sapiens]	[49]
HTR1A	3350	ENSP00000316244	P08908	5-hydroxytryptamine (serotonin) receptor 1A [Homo sapiens]	[21]
ICAM1	3383	ENSP00000264832	P05362	intercellular adhesion molecule 1 (CD54), human rhinovirus receptor [Homo sapiens]	[8]
ICAM2	3384	ENSP00000225760	P13598	intercellular adhesion molecule 2 [Homo sapiens]	[15]
IGF1	3479	ENSP00000302665	P05019	insulin-like growth factor 1 (somatomedin C) [Homo sapiens]	[50]
IGF2	3481	ENSP00000348986	P01344	insulin-like growth factor 2 (somatomedin A) [Homo sapiens]	[15]
IGFBP1	3484	ENSP00000275525	P08833	insulin-like growth factor binding protein 1 [Homo sapiens]	[15]
IL15	3600	ENSP00000296545	P40933	interleukin 15 [Homo sapiens]	[51]
IL1A	3552	ENSP00000263339	P01583	interleukin 1, alpha [Homo sapiens]	[8]
IL6	3569	ENSP00000258743	P05231	interleukin 6 (interferon, beta 2) [Homo sapiens]	[8]
IL8RB	3579	ENSP00000319635	P25025	interleukin 8 receptor, beta [Homo sapiens]	[21]

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INS	3630	ENSP00000250971	P01308	insulin [Homo sapiens]	[15]
INSR	3643	ENSP00000303830	P06213	insulin receptor [Homo sapiens]	[15]
IRS1	3667	ENSP00000304895	P35568	insulin receptor substrate 1 [Homo sapiens]	[52]
ITGA2	3673	ENSP00000296585	P17301	integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor) [Homo sapiens]	[9]
ITGA2B	3674	ENSP00000262407	P08514	integrin, alpha 2b (platelet glycoprotein IIb of IIb/IIIa complex, antigen CD41) [Homo sapiens]	[15]
ITGB3	3690	ENSP00000271002	P05106	integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61) [Homo sapiens]	[9]
JAG1	182	ENSP00000254958	P78504	jagged 1 (Alagille syndrome) [Homo sapiens]	[24]
KALRN	8997	ENSP00000240874	O60229	kalirin, RhoGEF kinase [Homo sapiens]	[53]
KCNJ11	3767	ENSP00000345708	Q14654	potassium inwardly-rectifying channel, subfamily J, member 11 [Homo sapiens]	[15]
KL	9365	ENSP00000255481	Q9UEF7	klotho [Homo sapiens]	[21]
KLF2	10365	ENSP00000248071	Q9Y5W3	Kruppel-like factor 2 (lung) [Homo sapiens]	[54]
KLK1	3816	ENSP00000301420	P06870	kallikrein 1 [Homo sapiens]	[15]
KLK2	3817	ENSP00000313581	P20151	kallikrein-related peptidase 2 [Homo sapiens]	[15]
LCAT	3931	ENSP00000264005	P04180	lecithin-cholesterol acyltransferase [Homo sapiens]	[15]
LDLR	3949	ENSP00000252444	P01130	low density lipoprotein receptor (familial hypercholesterolemia) [Homo sapiens]	[9]
LEP	3952	ENSP00000312652	P41159	leptin (obesity homolog, mouse) [Homo sapiens]	[55]
LEPR	3953	ENSP00000330393	P48357	leptin receptor [Homo sapiens]	[15]
LIPC	3990	ENSP00000299022	P11150	lipase, hepatic [Homo sapiens]	[9]
LIPG	9388	ENSP00000261292	P07098	lipase, endothelial [Homo sapiens]	[56]
LPA	4018	ENSP00000321334	P08519	lipoprotein, Lp(a) [Homo sapiens]	[9]
LPL	4023	ENSP00000309757	P06858	lipoprotein lipase [Homo sapiens]	[9]
LRP6	4040	ENSP00000261349	O75581	low density lipoprotein receptor-related protein 6 [Homo sapiens]	[57]
LRP8	7804	ENSP00000303634	Q14114	low density lipoprotein receptor-related protein 8, apolipoprotein e receptor [Homo sapiens]	[15]
MGP	4256	ENSP00000228938	P08493	matrix Gla protein [Homo sapiens]	[8]
MIF	4282	ENSP00000215754	P14174	macrophage migration inhibitory factor (glycosylation-inhibiting factor) [Homo sapiens]	[21]
MMP2	4313	ENSP00000219070	P08253	matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase) [Homo sapiens]	[21]
MMP3	4314	ENSP00000299855	P08254	matrix metalloproteinase 3 (stromelysin 1, procollagenase) [Homo sapiens]	[9]
MMP9	4318	ENSP00000216953	P14780	matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase) [Homo sapiens]	[21]
MPL	4352	ENSP00000236056	Q308M1	myeloproliferative leukemia virus oncogene [Homo sapiens]	[15]

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MPO	4353	ENSP00000344419	P05164	myeloperoxidase [Homo sapiens]	[58]
MSR1	4481	ENSP00000262101	P21757	macrophage scavenger receptor 1 [Homo sapiens]	[8]
MTHFR	4524	ENSP00000315965	P42898	5,10-methylenetetrahydrofolate reductase (NADPH) [Homo sapiens]	[9]
MTRR	4552	ENSP00000264668	Q9UBK8	5-methyltetrahydrofolate-homocysteine methyltransferase reductase [Homo sapiens]	[19]
MTTP	4547	ENSP00000265517	P55157	microsomal triglyceride transfer protein [Homo sapiens]	[8]
NAT2	10	ENSP00000286479	P11245	N-acetyltransferase 2 (arylamine N-acetyltransferase) [Homo sapiens]	[15]
NCF2	4688	ENSP00000340837	P19878	neutrophil cytosolic factor 2 (65kDa, chronic granulomatous disease, autosomal 2	[59]
NOS2A	4843	ENSP00000327251	P35228	nitric oxide synthase 2A (inducible, hepatocytes) [Homo sapiens]	[8]
NOS3	4846	ENSP00000297494	P29474	nitric oxide synthase 3 (endothelial cell) [Homo sapiens]	[9]
NPPA	4878	ENSP00000309540	P01160	natriuretic peptide precursor A [Homo sapiens]	[9]
NPPB	4879	ENSP00000240174	P16860	natriuretic peptide precursor B [Homo sapiens]	[15]
NPPC	4880	ENSP00000295440	P23582	natriuretic peptide precursor C [Homo sapiens]	[15]
NPR3	4883	ENSP00000265074	P17342	natriuretic peptide receptor C/guanylate cyclase C (atrionatriuretic peptide receptor C) [Homo sapiens]	[15]
NPY1R	4886	ENSP00000354652	P25929	neuropeptide Y receptor Y1 [Homo sapiens]	[21]
NR3C1	2908	ENSP00000231509	P04150	nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor) [Homo	[60]
NR3C2	4306	ENSP00000347441	P08235	nuclear receptor subfamily 3, group C, member 2 [Homo sapiens]	[24]
NRG1	3084	ENSP00000349275	Q02297	neuregulin 1 [Homo sapiens]	[61]
OLR1	4973	ENSP00000309124	P78380	oxidized low density lipoprotein (lectin-like) receptor 1 [Homo sapiens]	[62]
P2RY12	64805	ENSP00000307259	Q9H244	purinergic receptor P2Y, G-protein coupled, 12 [Homo sapiens]	[63]
PCSK9	255738	ENSP00000303208	Q8NBP7	proprotein convertase subtilisin/kexin type 9 [Homo sapiens]	[64]
PDE4D	5144	ENSP00000345502	Q08499	phosphodiesterase 4D, cAMP-specific (phosphodiesterase E3 duncce homolog, Drosoph	[65]
PDGFRA	5156	ENSP00000257290	P16234	platelet-derived growth factor receptor, alpha polypeptide [Homo sapiens]	[8]
PF4	5196	ENSP00000296029	P02776	platelet factor 4 (chemokine (C-X-C motif) ligand 4) [Homo sapiens]	[66]
PLA2G1B	5319	ENSP00000312286	P04054	phospholipase A2, group IB (pancreas) [Homo sapiens]	[15]
PLA2G2A	5320	ENSP00000328224	P14555	phospholipase A2, group IIA (platelets, synovial fluid) [Homo sapiens]	[67]
PNMT	5409	ENSP00000255389	P11086	phenylethanolamine N-methyltransferase [Homo sapiens]	[15]
PON1	5444	ENSP00000222381	P27169	paraoxonase 1 [Homo sapiens]	[9]
PON2	5445	ENSP00000222572	Q15165	paraoxonase 2 [Homo sapiens]	[9]
PPARA	5465	ENSP00000262735	Q07869	peroxisome proliferator-activated receptor alpha [Homo sapiens]	[68]

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PPARG	5468	ENSP00000287820	P37231	peroxisome proliferator-activated receptor gamma [Homo sapiens]	[9]
PROS1	5627	ENSP00000330021	P07225	protein S (alpha) [Homo sapiens]	[15]
PTAFR	5724	ENSP00000301974	P25105	platelet-activating factor receptor [Homo sapiens]	[15]
PTGER3	5733	ENSP00000345004	P43115	prostaglandin E receptor 3 (subtype EP3) [Homo sapiens]	[15]
PTGIS	5740	ENSP00000244043	Q16647	prostaglandin I2 (prostacyclin) synthase [Homo sapiens]	[15]
PTGS1	5742	ENSP00000354612	P00395	prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase) [Homo sapiens]	[15]
PTGS2	5743	ENSP00000186982	P35354	prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase) [Homo sapiens]	[15]
PTH1R	5745	ENSP00000324788	Q03431	parathyroid hormone receptor 1 [Homo sapiens]	[15]
RENBP	5973	ENSP00000218151	P51606	renin binding protein [Homo sapiens]	[15]
SAA1	6288	ENSP00000308762	P02735	serum amyloid A1 [Homo sapiens]	[69]
SCARB1	949	ENSP00000261693	Q8WTV0	scavenger receptor class B, member 1 [Homo sapiens]	[70]
SCNN1A	6337	ENSP00000353292	P37088	sodium channel, nonvoltage-gated 1 alpha [Homo sapiens]	[9]
SCNN1B	6338	ENSP00000302874	P51168	sodium channel, nonvoltage-gated 1, beta (Liddle syndrome) [Homo sapiens]	[71]
SCNN1G	6340	ENSP00000300061	P51170	sodium channel, nonvoltage-gated 1, gamma [Homo sapiens]	[71]
SELE	6401	ENSP00000331736	P16581	selectin E (endothelial adhesion molecule 1) [Homo sapiens]	[21]
SELL	6402	ENSP00000236147	P14151	selectin L (lymphocyte adhesion molecule 1) [Homo sapiens]	[21]
SELP	6403	ENSP00000263686	P16109	selectin P (granule membrane protein 140kDa, antigen CD62) [Homo sapiens]	[8]
SERPINA5	5104	ENSP00000298842	P05154	serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 5 [Homo sapiens]	[15]
SERPINB2	5055	ENSP00000299502	P05120	serpin peptidase inhibitor, clade B (ovalbumin), member 2 [Homo sapiens]	[15]
SERPIND1	3053	ENSP00000215727	P05546	serpin peptidase inhibitor, clade D (heparin cofactor), member 1 [Homo sapiens]	[15]
SERPINE1	5054	ENSP00000223095	P05121	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type	[9]
SHBG	6462	ENSP00000250080	P04278	sex hormone-binding globulin [Homo sapiens]	[72]
SLC12A3	6559	ENSP00000262502	P55017	solute carrier family 12 (sodium/chloride transporters), member 3 [Homo sapiens]	[15]
SLC2A1	6513	ENSP00000270929	P11166	solute carrier family 2 (facilitated glucose transporter), member 1 [Homo sapiens]	[15]
SLC2A2	6514	ENSP00000323568	P11168	solute carrier family 2 (facilitated glucose transporter), member 2 [Homo sapiens]	[15]
SLC2A4	6517	ENSP00000320935	P14672	solute carrier family 2 (facilitated glucose transporter), member 4 [Homo sapiens]	[15]
SLC2A5	6518	ENSP00000270684	P22732	solute carrier family 2 (facilitated glucose/fructose transporter), member 5 [Homo sapiens]	[15]
SLC4A1	6521	ENSP00000262418	P02730	solute carrier family 4, anion exchanger, member 1 (erythrocyte membrane protein band 3, Diego blood group) [Homo sapiens]	[15]
SLC5A1	6523	ENSP00000266088	P13866	solute carrier family 5 (sodium/glucose cotransporter), member 1 [Homo sapiens]	[15]

Symbol	GeneID	StringID	UniProtID	GeneName	Ref
SLC6A2	6530	ENSP00000219833	P23975	solute carrier family 6 (neurotransmitter transporter, noradrenalin), member 2 [Homo sapiens]	[15]
SLC8A1	6546	ENSP00000332931	P32418	solute carrier family 8 (sodium/calcium exchanger), member 1 [Homo sapiens]	[15]
SLC9A1	6548	ENSP00000263980	P19634	solute carrier family 9 (sodium/hydrogen exchanger), member 1 (antiporter, Na ⁺ /H ⁺ , amiloride sensitive) [Homo sapiens]	[15]
SOD2	6648	ENSP00000337127	P04179	superoxide dismutase 2, mitochondrial [Homo sapiens]	[21]
SREBF1	6720	ENSP00000261646	P36956	sterol regulatory element binding transcription factor 1 [Homo sapiens]	[73]
STAT3	6774	ENSP00000264657	P40763	signal transducer and activator of transcription 3 (acute-phase response factor)	[74]
TAGLN	6876	ENSP00000278968	Q01995	transgelin [Homo sapiens]	[21]
TBXA2R	6915	ENSP00000248419	P21731	thromboxane A2 receptor [Homo sapiens]	[15]
TBXAS1	6916	ENSP00000338087	P24557	thromboxane A synthase 1 (platelet, cytochrome P450, family 5, subfamily A) [Hom	[15]
TEK	7010	ENSP00000346578	Q5TCU2	TEK tyrosine kinase, endothelial (venous malformations, multiple cutaneous and m	[12]
TFPI	7035	ENSP00000233156	P10646	tissue factor pathway inhibitor (lipoprotein-associated coagulation inhibitor) [Homo sapiens]	[15]
TGFB1	7040	ENSP00000221930	P01137	transforming growth factor, beta 1 [Homo sapiens]	[75]
TGFB2	7042	ENSP00000264103	P61812	transforming growth factor, beta 2 [Homo sapiens]	[15]
TGFB1	7045	ENSP00000306306	Q15582	transforming growth factor, beta-induced, 68kDa [Homo sapiens]	[8]
TGFBR3	7049	ENSP00000212355	Q03167	transforming growth factor, beta receptor III [Homo sapiens]	[15]
THBD	7056	ENSP00000315029	P07204	thrombomodulin [Homo sapiens]	[21]
THBS1	7057	ENSP00000260356	P07996	thrombospondin 1 [Homo sapiens]	[76]
THPO	7066	ENSP00000204615	P40225	thrombopoietin (myeloproliferative leukemia virus oncogene ligand, megakaryocyte growth and development factor) [Homo sapiens]	[15]
TIMP1	7076	ENSP00000218388	P01033	TIMP metalloproteinase inhibitor 1 [Homo sapiens]	[21]
TLR1	7096	ENSP00000354932	Q15399	toll-like receptor 1 [Homo sapiens]	[77]
TLR2	7097	ENSP00000260010	O60603	toll-like receptor 2 [Homo sapiens]	[77]
TLR4	7099	ENSP00000346893	O00206	toll-like receptor 4 [Homo sapiens]	[78]
TNF	7124	ENSP00000229681	P01375	tumor necrosis factor (TNF superfamily, member 2) [Homo sapiens]	[21]
TNFRSF11B	4982	ENSP00000297350	O00300	tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin) [Homo s	[79]
TNFRSF1A	7132	ENSP00000162749	P19438	tumor necrosis factor receptor superfamily, member 1A [Homo sapiens]	[21]
TRH	7200	ENSP00000303452	P20396	thyrotropin-releasing hormone [Homo sapiens]	[15]
TRHR	7201	ENSP00000309818	P34981	thyrotropin-releasing hormone receptor [Homo sapiens]	[15]
USF1	7391	ENSP00000289790	P22415	upstream transcription factor 1 [Homo sapiens]	[80]
UTS2	10911	ENSP00000054668	O95399	urotensin 2 [Homo sapiens]	[81]

Symbol	GeneID	StringID	UniProtID	GeneName	Ref
UTS2D	257313	ENSP00000340526	Q76510	urotensin 2 domain containing [Homo sapiens]	[82]
VCAM1	7412	ENSP00000294728	P19320	vascular cell adhesion molecule 1 [Homo sapiens]	[8]
VDR	7421	ENSP00000229022	P11473	vitamin D (1,25- dihydroxyvitamin D3) receptor [Homo sapiens]	[8]
VEGFA	7422	ENSP00000317598	P15692	vascular endothelial growth factor A [Homo sapiens]	[83]
VLDLR	7436	ENSP00000327160	P98155	very low density lipoprotein receptor [Homo sapiens]	[15]
VTN	7448	ENSP00000226218	P04004	vitronectin [Homo sapiens]	[84]
WRN	7486	ENSP00000298139	Q14191	Werner syndrome [Homo sapiens]	[85]

REFERENCES FOR ADDITIONAL FILE 1

1. Jensen M, Pai J, Mukamal K, Overvad K, Rimm E: **Common genetic variation in the ATP-binding cassette transporter A1, plasma lipids, and risk of coronary heart disease.** *Atherosclerosis* 2007, **195**:172-180.

2. Trip M, Smulders Y, Wegman J, Hu X, Boer J, ten B, JB, Zwinderman A, Kastelein J, Feskens E, Bergen A: **Frequent mutation in the ABCC6 gene (R1141X) is associated with a strong increase in the prevalence of coronary artery disease.** *Circulation* 2002, **13**:773-775.

3. Tsai C, Hwang J, Ritchie M, Moore J, Chiang F, Lai L, Hsu K, Tseng C, Lin J, Tseng Y: **Renin-angiotensin system gene polymorphisms and coronary artery disease in a large angiographic cohort: detection of high order gene-gene interaction.** *Atherosclerosis* 2007, **195**:172-180.

4. Cha S, Kim H, Jang Y, Park S, Kim J, Song M, Park J, Ryu H, Park H, Yoon S, et al: **Association of alpha-adducin Gly460Trp polymorphism with coronary artery disease in a Korean population.** *Journal of Hypertension* 2007, **25**:2413-2420.

5. Iacobellis G, Pistilli D, Gucciardo M, Leonetti F, Miraldi F, Brancaccio G, Gallo P, di G, CR: **Adiponectin expression in human epicardial adipose tissue in vivo is lower in patients with coronary artery disease.** *Cytokine* 2005, **29**:251-255.

6. Soccio T, Zhang Y, Bacci S, Mlynarski W, Placha G, Raggio G, Di P, R, Marucci A, Johnstone M, Gervino E, et al: **Common haplotypes at the adiponectin receptor 1 (ADIPOR1) locus are associated with increased risk of coronary artery disease in type 2 diabetes.** *Diabetes* 2006, **55**:2763-2770.

7. Stangl K, Dschietzig T, Richter C, Stangl V, Bartsch C, Zurbrügg H, Pregla R, Baumann G, Felix S, Laule M: **Cessation of pulmonary and coronary secretion of adrenomedullin peptides in the progression of human heart failure.** *Hormone and Metabolic Research* 2002, **34**:81-86.

8. Cambien F, Poirier O, Nicaud V, Herrmann S, Mallet C, Ricard S, Behague I, Hallet V, Blanc H, Loukaci V, et al: **Sequence diversity in 36 candidate genes for cardiovascular disorders.** *American Journal of Human Genetics* 1999, **65**:183-191.

9. Ng M, Wang Y, So W, Cheng S, Visvikis S, Zee R, Fernandez-Cruz A, Lindpaintner K, Chan J: **Ethnic Differences in the Linkage Disequilibrium and Distribution of Single-Nucleotide Polymorphisms in 35 Candidate Genes for Cardiovascular Diseases.** *Genomics* 2004, **83**:559-565.

10. Falcone C, Campo I, Emanuele E, Buzzi M, Zorzetto M, Sbarsi I, Cuccia M: **Relationship between the -374T/A RAGE gene polymorphism and angiographic coronary artery disease.** *International Journal of Molecular Medicine* 2004, **14**:1061-1064.

11. Jones A, Dhamrait S, Payne J, Hawe E, Li P, Toor I, Luong L, Wootton P, Miller G, Humphries S, Montgomery H: **Genetic variants of angiotensin II receptors and cardiovascular risk in hypertension.** *Hypertension* 2003, **42**:500-506.

12. Mitsuma W, Kodama M, Hirano S, Ito M, Ramadan M, Tanaka K, Hoyano M, Saigawa T, Kashimura T, Fuse K, et al: **Angiopoietin-1, angiopoietin-2 and tie-2 in the coronary circulation of patients with and without coronary collateral vessels.** *Circulation Journal* 2007, **71**:343-347.
13. Jenny N, Arnold A, Kuller L, Tracy R, Psaty B: **Serum amyloid P and cardiovascular disease in older men and women: results from the Cardiovascular Health Study.** *Arteriosclerosis, Thrombosis, and Vascular Biology* 2007, **27**:352-358.
14. Singh P, Singh M, Gaur S, Kaur T: **The ApoAI-CIII-AIV gene cluster and its relation to lipid levels in type 2 diabetes mellitus and coronary heart disease: determination of a novel susceptible haplotype.** *Diabetes and Vascular Disease Research* 2007, **4**:124-129.
15. Moreno-Luna R, Perez-Jimenez F, Marin C, Perez-Martinez P, Gomez P, Jimenez-Gomez Y, Delgado-Lista J, Moreno J, Tanaka T, Ordovas J, Lopez-Miranda J: **Two independent apolipoprotein A5 haplotypes modulate postprandial lipoprotein metabolism in a healthy Caucasian population.** *The Journal of clinical endocrinology and metabolism* 2007, **92**:2280-2285.
16. Riise R, Tornqvist K, Wright A, Myktyyn K, Sheffield V: **The phenotype in Norwegian patients with Bardet-Biedl syndrome with mutations in the BBS4 gene.** *Archives of Ophthalmology* 2002, **120**:1364-1367.
17. Nassar B, Darvesh S, Bevin L, Rockwood K, Kirkland S, O'Neill B, Bata I, Johnstone D, Title L: **Relation between butyrylcholinesterase K variant, paraoxonase 1 (PON1) Q and R and apolipoprotein E epsilon 4 genes in early-onset coronary artery disease.** *Clinical Biochemistry* 2002, **35**:205-209.
18. März W, Seelhorst U, Wellnitz B, Tiran B, Obermayer-Pietsch B, Renner W, Boehm B, Ritz E, Hoffmann M: **Alanine to serine polymorphism at position 986 of the calcium-sensing receptor associated with coronary heart disease, myocardial infarction, all-cause, and cardiovascular mortality.** *The Journal of clinical endocrinology and metabolism* 2007, **92**:2363-2369.
19. Urreizti R, Asteggiano C, Vilaseca M, Corbella E, Pintó X, Grinberg D, Balcells S: **A CBS haplotype and a polymorphism at the MSR gene are associated with cardiovascular disease in a Spanish case-control study.** *Clinical Biochemistry* 2007, **40**:864-868.
20. Sheikine Y, Olsen B, Gharizadeh B, Jatta K, Tornvall P, Ghaderi M: **Influence of eotaxin 67G>A polymorphism on plasma eotaxin concentrations in myocardial infarction survivors and healthy controls.** *Atherosclerosis* 2006, **189**:458-463.
21. Ohnishi Y, Tanaka T, Yamada R, Suematsu K, Minami M, Fuijii K, Hoki N, Kodama K, Nagaa S, Hayashi T, et al: **Identification of 187 single nucleotide polymorphisms (SNPs) among 41 candidate genes for ischemic heart disease in the Japanese population.** *Human Genetics* 2000, **106**:288-292.
22. Yan J, Zhu J, Gao L, Wu Z, Kong X, Zong R, Zhan L: **The effect of elevated serum soluble CD40 ligand on the prognostic value in patients with acute coronary syndromes.** *Clinica Chimica Acta* 2004, **343**:155-159.
23. Kardys I, de M, MP, Klaver C, Despriet D, Uitterlinden A, Hofman A, de J, PT, Witteman J: **Usefulness of combining complement factor H and C-reactive protein genetic profiles for predicting myocardial infarction (from the Rotterdam Study).** *The American Journal of Cardiology* 2007, **100**:646-648.
24. Milewicz D, Seidman C: **Genetics of Cardiovascular Disease.** *Circulation* 2000, **102**:103-111.
25. Giurgea N, Constantinescu M, Stanciu R, Suciu S, Muresan A: **Ceruloplasmin - acute-phase reactant or endogenous antioxidant? The case of cardiovascular disease.** *Medical Science Monitor* 2005, **11**:48-51.
26. Schroeder V, Wilmer M, Buehler B, Kohler H: **TAFI activity in coronary artery disease: a contribution to the current discussion on TAFI assays.** *Thrombosis and Haemostasis* 2006, **96**:236-237.
27. Eriksson P, Deguchi H, Samnegård A, Lundman P, Boquist S, Tornvall P, Ericsson C, Bergstrand L, Hansson L, Ye S, Hamsten A: **Human evidence that the cystatin C gene is implicated in focal progression of coronary artery disease.** *Arteriosclerosis, Thrombosis, and Vascular Biology* 2004, **24**:551-557.
28. Damås J, Boullier A, Waehre T, Smith C, Sandberg W, Green S, Aukrust P, Quehenberger O: **Expression of fractalkine (CX3CL1) and its receptor, CX3CR1, is elevated in coronary artery disease and is reduced during statin therapy.** *Arteriosclerosis, Thrombosis, and Vascular Biology* 2005, **25**:2567-2572.
29. Kao J, Kobashigawa J, Fishbein M, MacLellan W, Burdick M, Belperio J, Strieter R: **Elevated serum levels of the CXCR3 chemokine ITAC are associated with the development of transplant coronary artery disease.** *Circulation* 2003, **107**:1958-1961.
30. Sheikine Y, Bang C, Nilsson L, Samnegård A, Hamsten A, Jonasson L, Eriksson P, Sirsjö A: **Decreased plasma CXCL16/SR-PSOX concentration is associated with coronary artery disease.** *Atherosclerosis* 2006, **188**:462-466.

31. Niemiec P, Iwona Z, Krystian W: **The 242T variant of the CYBA gene polymorphism increases the risk of coronary artery disease associated with cigarette smoking and hypercholesterolemia.** *Coronary Artery Disease* 2007, **18**:339-346.
32. Wang X, Greco M, Sim A, Duarte N, Wang J, Wilcken D: **Effect of CYP1A1 MspI polymorphism on cigarette smoking related coronary artery disease and diabetes.** *Atherosclerosis* 2002, **162**:391-397.
33. Lee C, North K, Bray M, Couper D, Heiss G, Zeldin D: **CYP2J2 and CYP2C8 polymorphisms and coronary heart disease risk: the Atherosclerosis Risk in Communities (ARIC) study.** *Pharmacogenetics and Genomics* 2007, **17**:349-358.
34. Daley G, Cargill M: **The Heart SNPs a Beat: Polymorphisms in Candidate Genes for Cardiovascular Disease.** *Trends in Cardiovascular Medicine* 2001, **11**:60-66.
35. Abate N, Chandalia M, Di P, R, Foster D, Grundy S, Trischitta V: **Mechanisms of Disease: ectonucleotide pyrophosphatase phosphodiesterase 1 as a 'gatekeeper' of insulin receptors.** *Nature Clinical Practice Endocrinology & Metabolism* 2006, **2**:694-701.
36. Winnicki M, Shamsuzzaman A, Lanfranchi P, Accurso V, Olson E, Davison D, Somers V: **Erythropoietin and obstructive sleep apnea.** *American Journal of Hypertension* 2004, **17**:783-786.
37. Mansur A, P, Nogueira C, Strunz C, Aldrighi J, Ramires J: **Genetic polymorphisms of estrogen receptors in patients with premature coronary artery disease.** *Archives of Medical Research* 2005, **36**:511-517.
38. Stan S, Lambert M, Delvin E, Paradis G, O'loughlin J, Hanley J, Levy E: **Intestinal fatty acid binding protein and microsomal triglyceride transfer protein polymorphisms in French-Canadian youth.** *Journal of Lipid Research* 2005, **46**:320-327.
39. Powell J, Turner R, Sian M, Debasso R, Länne T: **Influence of fibrillin-1 genotype on the aortic stiffness in men.** *Journal of Applied Physiology* 2005, **99**:1036-1040.
40. Connelly J, Wang T, Cox J, Haynes C, Wang L, Shah S, Crosslin D, Hale A, Nelson S, Crossman D, et al: **GATA2 is associated with familial early-onset coronary artery disease.** *PLoS Genetics* 2006, **2**:1265-1273.
41. Nakamura S, Sugiyama S, Fujioka D, Kawabata K, Ogawa H, Kugiyama K: **Polymorphism in glutamate-cysteine ligase modifier subunit gene is associated with impairment of nitric oxide-mediated coronary vasomotor function.** *Circulation* 2003, **108**:1425-1427.
42. de Boer J, Lambalk C, Hendriks H, van Aken C, van der Veen E, Schoemaker J: **Growth hormone secretion is impaired but not related to insulin sensitivity in non-obese patients with polycystic ovary syndrome.** *Human Reproduction* 2004, **19**:504-509.
43. Lanfear D, Jones P, Marsh S, Cresci S, Spertus J, McLeod H: **Connexin37 (GJA4) genotype predicts survival after an acute coronary syndrome.** *American Heart Journal* 2007, **154**:561-566.
44. Holtzman J: **The role of low levels of the serum glutathione-dependent peroxidase and glutathione and high levels of serum homocysteine in the development of cardiovascular disease.** *Clinical Laboratory* 2002, **48**:129-130.
45. Abu-Amro K, Al-Boudari O, Mohamed G, Dzimir N: **T null and M null genotypes of the glutathione S-transferase gene are risk factor for CAD independent of smoking.** *BMC Medical Genetics* 2006, **7**:38-44.
46. Dilley J, Ganesan A, Deepa R, Deepa M, Sharada G, Williams O, Mohan V: **Association of A1C with cardiovascular disease and metabolic syndrome in Asian Indians with normal glucose tolerance.** *Diabetes Care* 2007, **30**:1527-1532.
47. van der A D, Peeters P, Grobbee D, Roest M, Marx J, Voorbij H, van der Schouw Y: **HFE mutations and risk of coronary heart disease in middle-aged women.** *European Journal of Clinical Investigation* 2006, **36**:682-690.
48. Chen Y, Lin S, Lin M, Tsai H, Kuo S, Chen J, Charng M, Wu T, Chen L, Ding Y, et al: **Microsatellite polymorphism in promoter of heme oxygenase-1 gene is associated with susceptibility to coronary artery disease in type 2 diabetic patients.** *Human Genetics* 2002, **111**:1-8.
49. Giannesi D, Colotti C, Maltinti M, Del R, S, Prontera C, Turchi S, Labbate A, Neglia D: **Circulating heat shock proteins and inflammatory markers in patients with idiopathic left ventricular dysfunction: their relationships with myocardial and microvascular impairment.** *Cell Stress and Chaperones* 2007, **12**:265-274.

50. Jia G, Mitra A, Cheng G, Gangahar D, Agrawal D: **Angiotensin II and IGF-1 regulate connexin43 expression via ERK and p38 signaling pathways in vascular smooth muscle cells of coronary artery bypass conduits.** *The Journal of Surgical Research* 2007, **142**:137-142.
51. Wuttge D, Eriksson P, Sirsjö A, Hansson G, Stemme S: **Expression of interleukin-15 in mouse and human atherosclerotic lesions.** *The American Journal of Pathology* 2001, **159**:417-423.
52. Delafontaine P: **IRS-1 Variant: A New Risk Factor for Coronary Artery Disease?** *Arteriosclerosis, Thrombosis, and Vascular Biology* 2000, **20**:283-284.
53. Wang L, Hauser E, Shah S, Pericak-Vance M, Haynes C, Crosslin D, Harris M, Nelson S, Hale A, Granger C, et al: **Peakwide mapping on chromosome 3q13 identifies the kalirin gene as a novel candidate gene for coronary artery disease.** *American Journal of Human Genetics* 2007, **80**:650-663.
54. Das H, Kumar A, Lin Z, Patino W, Hwang P, Feinberg M, Majumder P, Jain M: **Kruppel-like factor 2 (KLF2) regulates proinflammatory activation of monocytes.** *Proceedings in National Academy of Science* 2006, **103**:6653-6658.
55. Chaldakov G, Fiore M, Stankulov I, Hristova M, Antonelli A, Manni L, Ghenev P, Angelucci F, Aloe L: **NGF, BDNF, leptin, and mast cells in human coronary atherosclerosis and metabolic syndrome.** *Archives of Physiology and Biochemistry* 2001, **109**:357-360.
56. Hutter C, Austin M, Farin F, Viernes H, Edwards K, Leonetti D, McNeely M, Fujimoto W: **Association of endothelial lipase gene (LIPG) haplotypes with high-density lipoprotein cholesterol subfractions and apolipoprotein AI plasma levels in Japanese Americans.** *Atherosclerosis* 2006, **185**:78-86.
57. Mani A, Radhakrishnan J, Wang H, Mani A, Mani M, Nelson-Williams C, Carew K, Mane S, Najmabadi H, Wu D, Lifton R: **LRP6 mutation in a family with early coronary disease and metabolic risk factors.** *Science* 2007, **315**:1278-1282.
58. Asselbergs F, Reynolds W, Cohen-Tervaert J, Jessurun G, Tio R: **Myeloperoxidase polymorphism related to cardiovascular events in coronary artery disease.** *The American Journal of Medicine* 2004, **116**:429-430.
59. Guzik T, Sadowski J, Guzik B, Jopek A, Kapelak B, Przybylowski P, Wierzbicki K, Korbut R, Harrison D, Channon K: **Coronary artery superoxide production and nox isoform expression in human coronary artery disease.** *Arteriosclerosis, Thrombosis, and Vascular Biology* 2006, **26**:333-339.
60. Lin R, Wang X, Morris B: **Association of coronary artery disease with glucocorticoid receptor N363S variant.** *Hypertension* 2003, **41**:404-407.
61. Panutsopoulos D, Arvanitis D, Tsatsanis C, Papalambros E, Sigala F, Spandidos D: **Expression of heregulin in human coronary atherosclerotic lesions.** *Journal of Vascular Research* 2005, **42**:463-474.
62. Hayashida K, Kume N, Murase T, Minami M, Nakagawa D, Inada T, Tanaka M, Ueda A, Kominami G, Kambara H, et al: **Serum soluble lectin-like oxidized low-density lipoprotein receptor-1 levels are elevated in acute coronary syndrome: a novel marker for early diagnosis.** *Circulation* 2005, **112**:812-818.
63. Cavallari U, Trabetti E, Malerba G, Biscuola M, Girelli D, Olivieri O, Martinelli N, Angiolillo D, Corrocher R, Pignatti P: **Gene sequence variations of the platelet P2Y12 receptor are associated with coronary artery disease.** *BMC Medical Genetics* 2007, **8**:59-64.
64. Cohen J, Boerwinkle E, Mosley T, Jr, Hobbs H: **Sequence variations in PCSK9, low LDL, and protection against coronary heart disease.** *The New England Journal of Medicine* 2006, **354**:1264-1272.
65. Wang Q: **Molecular genetics of coronary artery disease.** *Current Opinion in Cardiology* 2005, **20**:182-188.
66. Ma J, Liew C: **Gene profiling identifies secreted protein transcripts from peripheral blood cells in coronary artery disease.** *Journal of Molecular and Cellular Cardiology* 2003, **53**:993-998.
67. Wootton P, Drenos F, Cooper J, Thompson S, Stephens J, Hurt-Camejo E, Wiklund O, Humphries S, Talmud P: **Tagging-SNP haplotype analysis of the secretory PLA2IIa gene PLA2G2A shows strong association with serum levels of sPLA2IIa: results from the UDACS study.** *Human Molecular Genetics* 2006, **15**:355-361.
68. Zak I, Balcerzyk A, Sarecka B, Niemiec P, Ciemniewski Z, Dylag S: **Contemporaneous carrier-state of two or three "proatherosclerotic" variants of APOE, ICAM1, PPARG and PAI-1 genes differentiate CAD patients from healthy individuals.** *Clinica Chimica Acta* 2005, **362**:110-118.
69. Ogasawara K, Mashibab S, Wadac Y, Saharara M, Uchidab K, Aizawaa T, Kodamac T: **A serum amyloid A and LDL complex as a new prognostic marker in stable coronary artery disease.** *Atherosclerosis* 2004, **174**:349-356.

70. McCarthy J, Lehner T, Reeves C, Moliterno D, Newby L, Rogers W, Topol E, G, investigators: **Association of genetic variants in the HDL receptor, SR-B1, with abnormal lipids in women with coronary artery disease.** *Journal of Medical Genetics* 2003, **40**:453-458.
71. Doris P: **Hypertension Genetics, Single Nucleotide Polymorphisms, and the Common Disease:Common Variant Hypothesis.** *Hypertension* 2001, **39**:323-331.
72. Kalme T, Seppälä M, Qiao Q, Koistinen R, Nissinen A, Harrela M, Loukovaara M, Leinonen P, Tuomilehto J: **Sex hormone-binding globulin and insulin-like growth factor-binding protein-1 as indicators of metabolic syndrome, cardiovascular risk, and mortality in elderly men.** *The Journal of clinical endocrinology and metabolism* 2005, **90**:1550-1556.
73. Rios D, Vargas A, Torres M, Zago A, Callegari-Jacques S, Hutz M: **Interaction between SREBP-1a and APOB polymorphisms influences total and low-density lipoprotein cholesterol levels in patients with coronary artery disease.** *Clinical Genetics* 2003, **63**:380-385.
74. Zhang L, Kao W, Berthier-Schaad Y, Liu Y, Plantinga L, Jaar B, Fink N, Powe N, Klag M, Smith M, Coresh J: **Haplotype of signal transducer and activator of transcription 3 gene predicts cardiovascular disease in dialysis patients.** *Journal of the American Society of Nephrology* 2006, **17**:2285-2292.
75. Dabek J, Mazurek U, Gasior Z, Wilczok T, Kulach A, Kucia-Kuzma S: **Transcriptional activity of genes encoding Transforming Growth Factor beta and its receptors in peripheral blood mononuclear cells from patients with acute coronary syndromes.** *International Journal of Cardiology* 2006, **111**:275-279.
76. Hannah B, Misenheimer T, Pranghofer M, Mosher D: **A polymorphism in thrombospondin-1 associated with familial premature coronary artery disease alters Ca²⁺ binding.** *Journal of Biological Chemistry* 2004, **279**:51915-51922.
77. Mizoguchi E, Orihara K, Hamasaki S, Ishida S, Kataoka T, Ogawa M, Saihara K, Okui H, Fukudome T, Shinsato T, et al: **Association between Toll-like receptors and the extent and severity of coronary artery disease in patients with stable angina.** *Coronary Artery Disease* 2007, **18**:31-38.
78. Ameziane N, Beillat T, Verpillat P, Chollet-Martin S, Aumont M, Seknadji P, Lamotte M, Lebreton D, Ollivier V, de P, D: **Association of the Toll-like receptor 4 gene Asp299Gly polymorphism with acute coronary events.** *Arteriosclerosis, Thrombosis, and Vascular Biology* 2003, **23**:61-64.
79. Asanuma Y, Chung C, Oeser A, Solus J, Avalos I, Gebretsadik T, Shintani A, Raggi P, Sokka T, Pincus T, Stein C: **Serum osteoprotegerin is increased and independently associated with coronary-artery atherosclerosis in patients with rheumatoid arthritis.** *Atherosclerosis* 2007, **195**:135-141.
80. Lee J, Weissglas-Volkov D, Kyttälä M, Sinsheimer J, Jokiaho A, de B, TW, Lusi A, Brennan M, van G, MM, van d, Kallen, CJ, et al: **USF1 contributes to high serum lipid levels in Dutch FCHL families and U.S. whites with coronary artery disease.** *Arteriosclerosis, Thrombosis, and Vascular Biology* 2007, **27**:2222-2227.
81. Richards A, Charles C: **Urotensin II in the cardiovascular system.** *Peptides* 2004, **25**:1795-1802.
82. Watanabe T, Kanome T, Miyazaki A, Katagiri T: **Human urotensin II as a link between hypertension and coronary artery disease.** *Hypertension Research* 2006, **29**:375-387.
83. Panutsopoulos D, Papalambros E, Sigala F, Zafiroopoulos A, Arvanitis D, Spandidos D: **Protein and mRNA expression levels of VEGF-A and TGF-beta1 in different types of human coronary atherosclerotic lesions.** *International Journal of Molecular Medicine* 2005, **15**:603-610.
84. Ekmekci H, Sonmez H, Ekmekci O, Ozturk Z, Domanic N, Kokoglu E: **Plasma vitronectin levels in patients with coronary atherosclerosis are increased and correlate with extent of disease.** *Journal of Thrombosis and Thrombolysis* 2002, **14**:221-225.
85. Bohr V, Metter E, Harrigan J, von K, C, Liu J, Gray M, Majumdar A, Wilson D, 3rd, Seidman M: **Werner syndrome protein 1367 variants and disposition towards coronary artery disease in Caucasian patients.** *Mechanisms of Ageing and Development* 2004, **125**:491-496.

Additional File 2 - Cardiovascular disease functional linkage network composed of 1536 proteins and 3345 interactions. After filtering the network with the interaction confidence score and the orphan nodes that are not connected to the major component, the extended network was completed with 1536 protein and 3345 interactions. 206 (13.41 %) of this extended network belongs to the core proteins. The proteins added to the network by extension are indicated with “*”.

Symbol	StringID	Symbol	StringID	CS
TLR1	ENSP00000354932	TLR10*	ENSP00000354459	969
NPY1R	ENSP00000354652	PYY*	ENSP00000353198	983
CD36	ENSP00000353555	ITGB1*	ENSP00000352630	903
PAPSS2*	ENSP00000354436	ENPP1	ENSP00000350964	900
TLR1	ENSP00000354932	TLR7*	ENSP00000349736	946
TLR1	ENSP00000354932	IRAK4*	ENSP00000349096	982
ENSP00000353540*	ENSP00000353540	APOA4	ENSP00000350425	990
ENSP00000352471*	ENSP00000352471	APOA4	ENSP00000350425	923
CASR	ENSP00000353556	FLNA*	ENSP00000349183	938
TLR1	ENSP00000354932	TLR4	ENSP00000346893	981
TLR10*	ENSP00000354459	TLR4	ENSP00000346893	945
PTGS1	ENSP00000354612	PTGES2*	ENSP00000345341	976
IGF2R*	ENSP00000349437	IGF2	ENSP00000348986	993
SOX10*	ENSP00000354130	EDNRB	ENSP00000343922	909
PTGS1	ENSP00000354612	PTGES*	ENSP00000342385	975
TLR7*	ENSP00000349736	TLR4	ENSP00000346893	945
DNCL2A*	ENSP00000349679	TLR4	ENSP00000346893	900
IRAK4*	ENSP00000349096	TLR4	ENSP00000346893	992
ENPP1	ENSP00000350964	ALPL*	ENSP00000343937	902
GRB2*	ENSP00000348125	TEK	ENSP00000346578	985
APOA4	ENSP00000350425	HNF4A*	ENSP00000343807	907
ENPP1	ENSP00000350964	COAC*	ENSP00000343190	900
ENPP1	ENSP00000350964	PGM1*	ENSP00000342316	900
GAD1*	ENSP00000350928	ADIPOR1	ENSP00000341785	900
TAT*	ENSP00000348234	MPO	ENSP00000344419	900
PTGS1	ENSP00000354612	TBXAS1	ENSP00000338087	972
TLR4	ENSP00000346893	HMGB1*	ENSP00000345347	967
IGF2	ENSP00000348986	HM13*	ENSP00000343032	900
HD*	ENSP00000347184	CBS	ENSP00000344460	999
GFRA1*	ENSP00000347591	EDNRB	ENSP00000343922	910
NRG1	ENSP00000349275	ERBB4*	ENSP00000342235	999
ENPP1	ENSP00000350964	NMNAT1*	ENSP00000339520	900
RAC1*	ENSP00000348461	NCF2	ENSP00000340837	999

Symbol	StringID	Symbol	StringID	CS
RET*	ENSP00000344798	EDNRB	ENSP00000343922	916
FGFR2	ENSP00000350166	FGF1*	ENSP00000338548	999
GATA2	ENSP00000345681	POU1F1*	ENSP00000342931	935
CD36	ENSP00000353555	THBS2*	ENSP00000334802	938
TEK	ENSP00000346578	STAT5A*	ENSP00000341208	943
TLR1	ENSP00000354932	IRAK1*	ENSP00000333139	988
TEK	ENSP00000346578	PTPN11*	ENSP00000340944	957
PTGS1	ENSP00000354612	CYP2U1*	ENSP00000333212	900
NRG1	ENSP00000349275	BRCA1*	ENSP00000337814	900
TLR4	ENSP00000346893	IKBKB*	ENSP00000339151	922
TST*	ENSP00000345812	HSPD1	ENSP00000340019	909
MPO	ENSP00000344419	DDC*	ENSP00000339928	900
IGF2	ENSP00000348986	WDR20*	ENSP00000335434	900
F5	ENSP00000354631	PROS1	ENSP00000330021	997
FGFR2	ENSP00000350166	FGF3*	ENSP00000334122	999
TLR4	ENSP00000346893	BTK*	ENSP00000337233	969
PTGES2*	ENSP00000345341	TBXAS1	ENSP00000338087	933
F8*	ENSP00000353393	PROS1	ENSP00000330021	995
F8*	ENSP00000353393	GP1BA	ENSP00000329380	900
NRG1	ENSP00000349275	PTK2B*	ENSP00000332816	920
ENSP00000347879*	ENSP00000347879	F3	ENSP00000334145	964
ENSP00000354710*	ENSP00000354710	NOS2A	ENSP00000327251	966
STAT1*	ENSP00000354394	NOS2A	ENSP00000327251	907
IGF2	ENSP00000348986	ASCL2*	ENSP00000332293	919
EDNRB	ENSP00000343922	EDN3*	ENSP00000337128	998
SRC*	ENSP00000353950	CSF1	ENSP00000327513	915
PTGES*	ENSP00000342385	TBXAS1	ENSP00000338087	957
TLR4	ENSP00000346893	TMED7*	ENSP00000333650	998
MAPK8*	ENSP00000353483	NOS2A	ENSP00000327251	902
IGF2	ENSP00000348986	WT1*	ENSP00000331327	917
TLR4	ENSP00000346893	IRAK1*	ENSP00000333139	997
CD36	ENSP00000353555	FANCB*	ENSP00000326819	900
TLR4	ENSP00000346893	RNF36*	ENSP00000332284	900

Symbol	StringID	Symbol	StringID	CS
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FLNA*	ENSP00000349183	GP1BA	ENSP00000329380	967
NF1*	ENSP00000351015	CSF1	ENSP00000327513	916
TLR1	ENSP00000354932	MYD88*	ENSP00000323890	992
CBS	ENSP00000344460	SHMT2*	ENSP00000333667	908
MAFK*	ENSP00000344903	SLC8A1	ENSP00000332931	900
ENPP1	ENSP00000350964	ENSP00000326424*	ENSP00000326424	900
ARG1*	ENSP00000349446	NOS2A	ENSP00000327251	952
FXYP1*	ENSP00000343314	SLC8A1	ENSP00000332931	910
TLR4	ENSP00000346893	IRF7*	ENSP00000329411	925
APOD*	ENSP00000345179	LEPR	ENSP00000330393	942
HSPD1	ENSP00000340019	HSPCA*	ENSP00000335153	961
CYP3A4	ENSP00000337915	NR1H2*	ENSP00000336528	906
HSPD1	ENSP00000340019	CENTG3*	ENSP00000334157	900
IGF2	ENSP00000348986	PLAG1*	ENSP00000325546	915
MFAP5*	ENSP00000348957	FBN1	ENSP00000325527	974
CBS	ENSP00000344460	SP1*	ENSP00000329357	902
LPA1*	ENSP00000351755	LPA	ENSP00000321334	900
EDG4*	ENSP00000351659	LPA	ENSP00000321334	900
GATA2	ENSP00000345681	ZFPM1*	ENSP00000326630	972
EDG3*	ENSP00000350878	LPA	ENSP00000321334	900
GYG2*	ENSP00000354624	GYS1	ENSP00000317904	957
FGFR2	ENSP00000350166	FGF8*	ENSP00000321797	999
PTPN11*	ENSP00000340944	LEPR	ENSP00000330393	968
IL17*	ENSP00000344192	NOS2A	ENSP00000327251	900
PTGS1	ENSP00000354612	VEGFA	ENSP00000317598	914
PTHLH*	ENSP00000346398	PTHR1	ENSP00000324788	995
SRC*	ENSP00000353950	VEGFA	ENSP00000317598	906
PTGS1	ENSP00000354612	ALOX15B*	ENSP00000316970	906
TLR4	ENSP00000346893	MYD88*	ENSP00000323890	999
VEGF165R2*	ENSP00000353582	VEGFA	ENSP00000317598	986
BCL2*	ENSP00000353498	VEGFA	ENSP00000317598	917
MAPK8*	ENSP00000353483	VEGFA	ENSP00000317598	902

Symbol	StringID	Symbol	StringID	CS
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PAQR2*	ENSP00000349616	ADIPOQ	ENSP00000320709	994
RUNX2*	ENSP00000352514	VEGFA	ENSP00000317598	910
PCSK7*	ENSP00000352346	VEGFA	ENSP00000317598	900
PTGS1	ENSP00000354612	ALOX12B*	ENSP00000315167	903
UBE2I*	ENSP00000348056	SLC2A4	ENSP00000320935	929
RELN*	ENSP00000341153	VLDLR	ENSP00000327160	999
ENPP1	ENSP00000350964	GYS1	ENSP00000317904	900
IGF2	ENSP00000348986	PHLDA2*	ENSP00000319231	901
ENPP3*	ENSP00000350265	GYS1	ENSP00000317904	900
TEK	ENSP00000346578	TNIP2*	ENSP00000321203	965
HSPD1	ENSP00000340019	MDH2*	ENSP00000327070	905
MEF2A*	ENSP00000346389	SLC2A4	ENSP00000320935	905
IGF2	ENSP00000348986	VEGFA	ENSP00000317598	918
TLR1	ENSP00000354932	TLR8*	ENSP00000312082	941
RAC1*	ENSP00000348461	VEGFA	ENSP00000317598	900
TJP1*	ENSP00000348416	VEGFA	ENSP00000317598	917
HIF1A*	ENSP00000338018	NOS2A	ENSP00000327251	900
MBTPS1*	ENSP00000344223	LPA	ENSP00000321334	900
FAS1*	ENSP00000347979	VEGFA	ENSP00000317598	916
MPO	ENSP00000344419	CALR*	ENSP00000320866	900
ENSP00000347879*	ENSP00000347879	VEGFA	ENSP00000317598	988
TLR1	ENSP00000354932	TLR9*	ENSP00000311174	983
SLC8A1	ENSP00000332931	CAV3*	ENSP00000331718	967
ENSP00000337459*	ENSP00000337459	NOS2A	ENSP00000327251	910
PTGS1	ENSP00000354612	CYP4A11*	ENSP00000311095	918
TEK	ENSP00000346578	VEGFA	ENSP00000317598	927
MMP14*	ENSP00000346201	VEGFA	ENSP00000317598	904
TLR4	ENSP00000346893	TRAF6*	ENSP00000316840	927
CBS	ENSP00000344460	SHMT1*	ENSP00000318868	975
TLR1	ENSP00000354932	TLR6*	ENSP00000309253	904
PTK2*	ENSP00000341189	LPA	ENSP00000321334	900
ADIPOR1	ENSP00000341785	ADIPOQ	ENSP00000320709	982

Symbol	StringID	Symbol	StringID	CS
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PTTG2*	ENSP00000344936	VEGFA	ENSP00000317598	903
ENSP00000353540*	ENSP00000353540	LPL	ENSP00000309757	986
MME*	ENSP00000353679	NPPA	ENSP00000309540	970
F5	ENSP00000354631	F2	ENSP00000308541	987
GALP*	ENSP00000349884	LEP	ENSP00000312652	900
PTPN1*	ENSP00000349544	LEP	ENSP00000312652	902
ENSP00000352471*	ENSP00000352471	LPL	ENSP00000309757	973
TLR4	ENSP00000346893	TOLLIP*	ENSP00000314733	976
FGFR2	ENSP00000350166	FGF5*	ENSP00000311697	996
LEPR	ENSP00000330393	SOC3*	ENSP00000330341	991
TEK	ENSP00000346578	ANGPT2	ENSP00000314897	999
HAND2*	ENSP00000352565	NPPA	ENSP00000309540	919
EDNRB	ENSP00000343922	GDNF*	ENSP00000317145	918
F8*	ENSP00000353393	F2	ENSP00000308541	967
SLC8A1	ENSP00000332931	MAF*	ENSP00000327048	900
CBS	ENSP00000344460	KIAA0828*	ENSP00000315931	900
STAT1*	ENSP00000354394	CXCL11	ENSP00000306884	952
PROS1	ENSP00000330021	SP1*	ENSP00000329357	900
CDAN1*	ENSP00000348564	HFE	ENSP00000311698	900
APOA4	ENSP00000350425	LPL	ENSP00000309757	978
PTK2*	ENSP00000341189	VEGFA	ENSP00000317598	917
GYG*	ENSP00000340736	GYS1	ENSP00000317904	995
TLR4	ENSP00000346893	TLR8*	ENSP00000312082	942
MEF2C*	ENSP00000349536	NPPA	ENSP00000309540	909
EDG1*	ENSP00000336689	LPA	ENSP00000321334	900
FRAP1*	ENSP00000354587	IRS1	ENSP00000304895	998
SRC*	ENSP00000353950	ADRB2	ENSP00000305372	912
CXCL12*	ENSP00000339913	VEGFA	ENSP00000317598	917
TLR4	ENSP00000346893	TLR9*	ENSP00000311174	946
SRC*	ENSP00000353950	IRS1	ENSP00000304895	908
MAPK8*	ENSP00000353483	IRS1	ENSP00000304895	999
SEPP1*	ENSP00000354888	LRP8	ENSP00000303634	906

Symbol	StringID	Symbol	StringID	CS
FRAP1*	ENSP00000354587	INSR	ENSP00000303830	910
CAV1*	ENSP00000339191	VEGFA	ENSP00000317598	903
TEK	ENSP00000346578	GRB7*	ENSP00000310771	966
UGP2*	ENSP00000338703	GYS1	ENSP00000317904	911
DAB1*	ENSP00000329120	VLDLR	ENSP00000327160	986
PTPRF*	ENSP00000353030	IRS1	ENSP00000304895	948
TLR4	ENSP00000346893	IRF3*	ENSP00000310127	927
TXNRD2*	ENSP00000354511	TRH	ENSP00000303452	900
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CCR3*	ENSP00000350003	CXCL11	ENSP00000306884	970
HIF1A*	ENSP00000338018	VEGFA	ENSP00000317598	922
TLR4	ENSP00000346893	TLR6*	ENSP00000309253	942
PTPRF*	ENSP00000353030	INSR	ENSP00000303830	993
POU1F1*	ENSP00000342931	GH1	ENSP00000312673	912
EXOC7*	ENSP00000334100	SLC2A4	ENSP00000320935	974
CCK*	ENSP00000342874	LEP	ENSP00000312652	918
NCF2	ENSP00000340837	CDC42*	ENSP00000314458	998
FGFR2	ENSP00000350166	NUDT6*	ENSP00000306070	900
PTPN6*	ENSP00000351285	IRS1	ENSP00000304895	955
CBS	ENSP00000344460	AHCYL1*	ENSP00000310774	900
ANG*	ENSP00000336762	VEGFA	ENSP00000317598	905
EDG1*	ENSP00000336689	VEGFA	ENSP00000317598	903
PROS1	ENSP00000330021	A2M*	ENSP00000323929	937
PTPN6*	ENSP00000351285	INSR	ENSP00000303830	967
PRKCQ*	ENSP00000349837	IRS1	ENSP00000304895	905
ENPP1	ENSP00000350964	INSR	ENSP00000303830	967
PTPN1*	ENSP00000349544	IRS1	ENSP00000304895	999
LEPR	ENSP00000330393	HY*	ENSP00000322408	906
IGF2	ENSP00000348986	PTEN*	ENSP00000304973	914
TLR4	ENSP00000346893	IL8*	ENSP00000306512	900
B2M*	ENSP00000340858	HFE	ENSP00000311698	997
PTPN1*	ENSP00000349544	INSR	ENSP00000303830	997
EDN3*	ENSP00000337128	EDNRA	ENSP00000315011	998

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SERPINB6*	ENSP00000338358	KLK2	ENSP00000313581	970
IGF2	ENSP00000348986	INSR	ENSP00000303830	972
BSG*	ENSP00000333769	VEGFA	ENSP00000317598	900
TLR4	ENSP00000346893	IL13*	ENSP00000304915	913
GRB2*	ENSP00000348125	INSR	ENSP00000303830	900
HSPD1	ENSP00000340019	CASP3*	ENSP00000311032	954
SMAD3*	ENSP00000332973	VEGFA	ENSP00000317598	906
CDKN2A*	ENSP00000354638	WRN	ENSP00000298139	963
SREBF2*	ENSP00000355169	ABCA1	ENSP00000297693	900
TBXAS1	ENSP00000338087	NFE2*	ENSP00000312436	900
NPR2*	ENSP00000341083	NPPA	ENSP00000309540	923
TLR4	ENSP00000346893	CD14*	ENSP00000304236	999
ENSP00000354710*	ENSP00000354710	NOS3	ENSP00000297494	940
CSF3R*	ENSP00000355406	CSF2	ENSP00000296871	985
SHMT2*	ENSP00000333667	MTHFR	ENSP00000315965	900
CD47*	ENSP00000355361	ITGA2	ENSP00000296585	953
TBX1*	ENSP00000331791	VEGFA	ENSP00000317598	909
GPR92*	ENSP00000327875	LPA	ENSP00000321334	900
MAPK9*	ENSP00000345524	IRS1	ENSP00000304895	943
WT1*	ENSP00000331327	VEGFA	ENSP00000317598	902
IGF2	ENSP00000348986	IGFBP6*	ENSP00000301464	976
GP1BA	ENSP00000329380	GP5*	ENSP00000319286	988
CD36	ENSP00000353555	COL1A2*	ENSP00000297268	967
KCNJ11	ENSP00000345708	ABCC8*	ENSP00000303960	979
HFE2*	ENSP00000337014	HFE	ENSP00000311698	904
FPRL1*	ENSP00000340191	SAA1	ENSP00000308762	900
G22P1*	ENSP00000352257	WRN	ENSP00000298139	990
TLR4	ENSP00000346893	IFNB1*	ENSP00000302523	920
ENSP00000352471*	ENSP00000352471	ABCA1	ENSP00000297693	969
VCP*	ENSP00000351777	WRN	ENSP00000298139	975
BCL2*	ENSP00000353498	IL15	ENSP00000296545	917
GHRL*	ENSP00000335074	LEP	ENSP00000312652	971

Symbol	StringID	Symbol	StringID	CS
GATA2	ENSP00000345681	HDAC3*	ENSP00000302967	994
PTGS1	ENSP00000354612	PTGDS2*	ENSP00000295256	925
TBX5*	ENSP00000338103	NPPA	ENSP00000309540	912
SMAD4*	ENSP00000341551	TGFB1	ENSP00000306306	900
SP1*	ENSP00000329357	VEGFA	ENSP00000317598	913
CXCL9*	ENSP00000354901	VCAM1	ENSP00000294728	917
ITGB1*	ENSP00000352630	ITGA2	ENSP00000296585	999
DGKH*	ENSP00000337572	LPL	ENSP00000309757	900
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MPO	ENSP00000344419	ITGB2*	ENSP00000303242	900
PTTG2*	ENSP00000344936	IGF1	ENSP00000302665	903
SERPINB6*	ENSP00000338358	F2	ENSP00000308541	964
PTGS1	ENSP00000354612	CYP4A22*	ENSP00000294337	900
TLR4	ENSP00000346893	CARD15*	ENSP00000300589	900
CBS	ENSP00000344460	AGXT*	ENSP00000302620	900
HSPD1	ENSP00000340019	PRNP*	ENSP00000306540	975
MAPK8*	ENSP00000353483	VCAM1	ENSP00000294728	900
PTGS1	ENSP00000354612	ALOX15*	ENSP00000293761	926
CX3CR1	ENSP00000351059	IL15	ENSP00000296545	906
CSF2RA*	ENSP00000350610	CSF2	ENSP00000296871	999
EDNRB	ENSP00000343922	ZFHX1B*	ENSP00000302501	906
PTK2*	ENSP00000341189	IRS1	ENSP00000304895	974
CSF1	ENSP00000327513	VEGFA	ENSP00000317598	908
ARG1*	ENSP00000349446	NOS3	ENSP00000297494	903
ENPP1	ENSP00000350964	NMNAT3*	ENSP00000296202	900
PTPN11*	ENSP00000340944	IRS1	ENSP00000304895	999
RGS12*	ENSP00000325204	IL8RB	ENSP00000319635	966
NOS2A	ENSP00000327251	VEGFA	ENSP00000317598	912
ITGB1*	ENSP00000352630	VCAM1	ENSP00000294728	999
GATA2	ENSP00000345681	PPARBP*	ENSP00000300651	936
FGG *	ENSP00000336829	F2	ENSP00000308541	980
ADRB3	ENSP00000343782	GNAS*	ENSP00000302237	931
UCP3*	ENSP00000323740	SLC2A4	ENSP00000320935	903

Symbol	StringID	Symbol	StringID	CS
FGFR2	ENSP00000350166	IL17RD*	ENSP00000296318	915
PTPN11*	ENSP00000340944	INSR	ENSP00000303830	997
RELN*	ENSP00000341153	LRP8	ENSP00000303634	999
GATA4*	ENSP00000334458	NPPA	ENSP00000309540	919
EIF4EBP1*	ENSP00000340691	INSR	ENSP00000303830	900
DNM2*	ENSP00000347890	NOS3	ENSP00000297494	900
EDG5*	ENSP00000322049	LPA	ENSP00000321334	900
CAV1*	ENSP00000339191	IRS1	ENSP00000304895	959
IKBKB*	ENSP00000339151	IRS1	ENSP00000304895	982
FAS1*	ENSP00000347979	CSF2	ENSP00000296871	926
LEPR	ENSP00000330393	LEP	ENSP00000312652	999
SOCS3*	ENSP00000330341	LEP	ENSP00000312652	900
STAT5A*	ENSP00000341208	IGF1	ENSP00000302665	903
CD36	ENSP00000353555	POU2F2*	ENSP00000292077	900
GSK3B*	ENSP00000324806	GYS1	ENSP00000317904	983
CYP11B2	ENSP00000325822	HSD11B2 *	ENSP00000316786	991
IL17*	ENSP00000344192	MMP3	ENSP00000299855	900
FAS1*	ENSP00000347979	IL15	ENSP00000296545	912
FGG *	ENSP00000336829	FGA	ENSP00000306361	981
IGF2	ENSP00000348986	IGFBP7*	ENSP00000295666	970
SOCS2*	ENSP00000339428	INSR	ENSP00000303830	960
FGG *	ENSP00000336829	FGB *	ENSP00000306099	975
TEK	ENSP00000346578	ANGPT1*	ENSP00000297450	999
ETS1*	ENSP00000324578	VEGFA	ENSP00000317598	918
CAV1*	ENSP00000339191	INSR	ENSP00000303830	968
HSPD1	ENSP00000340019	HSPA4*	ENSP00000302961	904
CSF1	ENSP00000327513	JUN*	ENSP00000314522	909
NFATC2*	ENSP00000346980	CSF2	ENSP00000296871	930
CYP3A4	ENSP00000337915	UGT2B7*	ENSP00000304811	967
BRCA1*	ENSP00000337814	IRS1	ENSP00000304895	901
SOCS1*	ENSP00000329418	LEP	ENSP00000312652	900
TLR4	ENSP00000346893	CSF2	ENSP00000296871	900
IRS2*	ENSP00000329289	LEP	ENSP00000312652	911

Symbol	StringID	Symbol	StringID	CS
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SLC2A4	ENSP00000320935	ADIPOQ	ENSP00000320709	956
HSPD1	ENSP00000340019	DHFR*	ENSP00000302637	994
GRB10*	ENSP00000338543	INSR	ENSP00000303830	999
SELE	ENSP00000331736	CD34*	ENSP00000310036	908
CXCR3*	ENSP00000335095	CXCL11	ENSP00000306884	999
APLN*	ENSP00000354758	USF1	ENSP00000289790	900
SHC1*	ENSP00000336919	IRS1	ENSP00000304895	997
H2AFX*	ENSP00000344507	WRN	ENSP00000298139	903
MMP1*	ENSP00000322788	VEGFA	ENSP00000317598	905
GRB10*	ENSP00000338543	IGF1	ENSP00000302665	915
SHC1*	ENSP00000336919	INSR	ENSP00000303830	999
NOSTRIN*	ENSP00000343997	NOS3	ENSP00000297494	967
EDNRB	ENSP00000343922	NOS3	ENSP00000297494	916
HIF1A*	ENSP00000338018	IGF1	ENSP00000302665	912
MPO	ENSP00000344419	IL3*	ENSP00000296870	900
HIST2H2BE*	ENSP00000336417	INSR	ENSP00000303830	900
ETS1*	ENSP00000324578	ANGPT2	ENSP00000314897	988
NOSIP*	ENSP00000343497	NOS3	ENSP00000297494	968
HSPD1	ENSP00000340019	PHB*	ENSP00000300408	900
PPAP2C*	ENSP00000329697	LPL	ENSP00000309757	900
FBN1	ENSP00000325527	ELN*	ENSP00000313565	968
HSPD1	ENSP00000340019	CLPX*	ENSP00000300107	974
SMAD3*	ENSP00000332973	TGFB1	ENSP00000306306	900
SHC1*	ENSP00000336919	IGF1	ENSP00000302665	909
NR1H3*	ENSP00000342470	ABCA1	ENSP00000297693	904
SERPINA4*	ENSP00000338154	KLK1	ENSP00000301420	997
PROS1	ENSP00000330021	F2	ENSP00000308541	944
NOS2A	ENSP00000327251	CASP3*	ENSP00000311032	900
GATA2	ENSP00000345681	TAL1*	ENSP00000294339	920
GP1BA	ENSP00000329380	F2	ENSP00000308541	999
APOA4	ENSP00000350425	APOA2*	ENSP00000289906	982
UGDH*	ENSP00000319501	GYS1	ENSP00000317904	900

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NCF2	ENSP00000340837	CYBB*	ENSP00000297870	999
FGFR2	ENSP00000350166	FGF17*	ENSP00000289823	997
NKX2-5*	ENSP00000327758	NPPA	ENSP00000309540	922
PTGS1	ENSP00000354612	CYP2C8*	ENSP00000285985	900
PTGS1	ENSP00000354612	CYP2C19*	ENSP00000285981	900
PTGS1	ENSP00000354612	CYP2C18*	ENSP00000285979	900
VLDLR	ENSP00000327160	LPL	ENSP00000309757	910
ENPP1	ENSP00000350964	PANK4*	ENSP00000288738	900
NOS2A	ENSP00000327251	ADC*	ENSP00000309580	900
STAT5A*	ENSP00000341208	CSF2	ENSP00000296871	904
NCOA6*	ENSP00000351894	PPARG	ENSP00000287820	970
UCP3*	ENSP00000323740	LEP	ENSP00000312652	904
PTPN11*	ENSP00000340944	CSF2	ENSP00000296871	909
PRKCD*	ENSP00000331602	IRS1	ENSP00000304895	959
NOS2A	ENSP00000327251	LTA*	ENSP00000308936	913
TLR1	ENSP00000354932	LY96*	ENSP00000284818	984
HSPD1	ENSP00000340019	HSPA9B*	ENSP00000297185	989
FOXO3A*	ENSP00000339527	NOS3	ENSP00000297494	908
ENPP1	ENSP00000350964	NMNAT2*	ENSP00000287713	900
MYB*	ENSP00000339992	CSF2	ENSP00000296871	910
CAV1*	ENSP00000339191	NOS3	ENSP00000297494	991
TEK	ENSP00000346578	CBFB*	ENSP00000290858	951
SHMT1*	ENSP00000318868	MTHFR	ENSP00000315965	980
SOCS3*	ENSP00000330341	IRS1	ENSP00000304895	999
BRCA1*	ENSP00000337814	WRN	ENSP00000298139	906
SMAD4*	ENSP00000341551	DCP1A	ENSP00000294241	975
VEGFA	ENSP00000317598	DAF*	ENSP00000316333	900
SOCS1*	ENSP00000329418	IRS1	ENSP00000304895	998
IRS2*	ENSP00000329289	IRS1	ENSP00000304895	917
ENSP00000337459*	ENSP00000337459	NOS3	ENSP00000297494	909
SOCS3*	ENSP00000330341	INSR	ENSP00000303830	998
SLC2A4	ENSP00000320935	LEP	ENSP00000312652	902
A2M*	ENSP00000323929	LPL	ENSP00000309757	900

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NCOR2*	ENSP00000348551	PPARG	ENSP00000287820	922
NOS2A	ENSP00000327251	IL8*	ENSP00000306512	900
CSF1	ENSP00000327513	FOS*	ENSP00000306245	919
UCP3*	ENSP00000323740	LPL	ENSP00000309757	903
ADIPOQ	ENSP00000320709	LEP	ENSP00000312652	918
VEGFA	ENSP00000317598	ARNT*	ENSP00000315637	912
IL21R*	ENSP00000338010	IL15	ENSP00000296545	933
NCF2	ENSP00000340837	CYBASC3*	ENSP00000294072	900
GP1BA	ENSP00000329380	GP9*	ENSP00000303942	996
GHRHR*	ENSP00000320180	GH1	ENSP00000312673	906
SOCS1*	ENSP00000329418	INSR	ENSP00000303830	998
ADIPOQ	ENSP00000320709	UCP2*	ENSP00000312029	900
SP1*	ENSP00000329357	INSR	ENSP00000303830	904
BDNF*	ENSP00000320002	LEP	ENSP00000312652	900
IRS2*	ENSP00000329289	INSR	ENSP00000303830	999
SHC1*	ENSP00000336919	CSF2	ENSP00000296871	910
VEGFA	ENSP00000317598	ANGPT2	ENSP00000314897	916
NOS2A	ENSP00000327251	NPR1*	ENSP00000305386	916
DAB1*	ENSP00000329120	LRP8	ENSP00000303634	998
VIL2*	ENSP00000338934	VCAM1	ENSP00000294728	934
CRP	ENSP00000319435	LEP	ENSP00000312652	967
TBXAS1	ENSP00000338087	PTGDS2*	ENSP00000295256	937
CASR	ENSP00000353556	PTH*	ENSP00000282091	909
MTHFR	ENSP00000315965	TYMS*	ENSP00000315644	976
TLR4	ENSP00000346893	ITGAM*	ENSP00000287497	910
ENPP1	ENSP00000350964	PGM3*	ENSP00000283977	900
IRS2*	ENSP00000329289	IGF1	ENSP00000302665	926
CYBRD1*	ENSP00000319141	HFE	ENSP00000311698	903
PRLR*	ENSP00000317835	GH1	ENSP00000312673	952
TLR1	ENSP00000354932	TIRAP*	ENSP00000279992	970
ADIPOQ	ENSP00000320709	LPL	ENSP00000309757	902
VLDLR	ENSP00000327160	LRP8	ENSP00000303634	908
SLC2A4	ENSP00000320935	AKT2*	ENSP00000309428	993

Symbol	StringID	Symbol	StringID	CS
VEGFA	ENSP00000317598	LEP	ENSP00000312652	905
NOS2A	ENSP00000327251	GATM*	ENSP00000303263	900
DGKZ*	ENSP00000320340	LPL	ENSP00000309757	900
CXCR3*	ENSP00000335095	PF4	ENSP00000296029	968
F2R	ENSP00000321326	F2	ENSP00000308541	977
FN1*	ENSP00000323534	TGFB1	ENSP00000306306	926
MPO	ENSP00000344419	ITGAM*	ENSP00000287497	900
CYP11B2	ENSP00000325822	CYP21A2*	ENSP00000303875	946
PROS1	ENSP00000330021	C4B*	ENSP00000299406	900
TLR4	ENSP00000346893	LY96*	ENSP00000284818	999
VEGFA	ENSP00000317598	CASP3*	ENSP00000311032	900
NRG1	ENSP00000349275	UTRN*	ENSP00000282749	906
CAV3*	ENSP00000331718	NOS3	ENSP00000297494	910
NCF2	ENSP00000340837	NCF1*	ENSP00000289473	999
PROS1	ENSP00000330021	SERPINA5	ENSP00000298842	936
CD86*	ENSP00000332049	CSF2	ENSP00000296871	926
GP5*	ENSP00000319286	F2	ENSP00000308541	967
LPA	ENSP00000321334	IL8*	ENSP00000306512	900
CYP11B2	ENSP00000325822	HSD3B2*	ENSP00000302238	967
CD86*	ENSP00000332049	IL15	ENSP00000296545	919
VEGFA	ENSP00000317598	CD34*	ENSP00000310036	920
IGF2	ENSP00000348986	PTH*	ENSP00000282091	910
VEGFA	ENSP00000317598	ADAM17*	ENSP00000309968	907
DHTR*	ENSP00000313925	KLK2	ENSP00000313581	968
ADIPOQ	ENSP00000320709	CNR1*	ENSP00000306843	914
CSF1	ENSP00000327513	RUNX1*	ENSP00000300305	906
JUN*	ENSP00000314522	LEP	ENSP00000312652	903
CALCR*	ENSP00000353385	ADM	ENSP00000278175	905
XRCC5*	ENSP00000329528	WRN	ENSP00000298139	996
GYS1	ENSP00000317904	AGL*	ENSP00000309020	908
CRP	ENSP00000319435	FCGR1A*	ENSP00000307399	967
FYN*	ENSP00000321899	IRS1	ENSP00000304895	953
DDX41*	ENSP00000330349	CSF2	ENSP00000296871	900

Symbol	StringID	Symbol	StringID	CS
SP1*	ENSP00000329357	ABCA1	ENSP00000297693	902
GP1BA	ENSP00000329380	YWHAZ*	ENSP00000297569	964
SP1*	ENSP00000329357	NOS3	ENSP00000297494	968
IL8RB	ENSP00000319635	IL8*	ENSP00000306512	999
CYP3A4	ENSP00000337915	NR1I3*	ENSP00000289912	903
SLC2A2	ENSP00000323568	ONECUT1*	ENSP00000302630	903
GP1BA	ENSP00000329380	COL1A2*	ENSP00000297268	900
IGF2	ENSP00000348986	FOXO1A*	ENSP00000280496	904
RHOA*	ENSP00000354222	HP	ENSP00000276297	967
TDGF3*	ENSP00000329126	CSF2	ENSP00000296871	900
VEGFA	ENSP00000317598	NPTX1*	ENSP00000307549	914
GH1	ENSP00000312673	IGHD*	ENSP00000312052	900
LEP	ENSP00000312652	UCP2*	ENSP00000312029	900
SLC2A4	ENSP00000320935	INSR	ENSP00000303830	902
IL8RB	ENSP00000319635	IL13*	ENSP00000304915	900
LPA	ENSP00000321334	EDG7*	ENSP00000303168	900
JUN*	ENSP00000314522	NPPA	ENSP00000309540	916
NOS2A	ENSP00000327251	NOS3	ENSP00000297494	911
VEGFA	ENSP00000317598	IL8*	ENSP00000306512	905
IL3RA*	ENSP00000327890	CSF2	ENSP00000296871	967
GH1	ENSP00000312673	PROP1*	ENSP00000311290	901
LEPR	ENSP00000330393	JAK1*	ENSP00000294423	900
VEGFA	ENSP00000317598	FOS*	ENSP00000306245	915
TLR4	ENSP00000346893	IL18*	ENSP00000280357	930
CSF1	ENSP00000327513	CSF2	ENSP00000296871	932
CSF1	ENSP00000327513	IL3*	ENSP00000296870	900
VEGFA	ENSP00000317598	NUDT6*	ENSP00000306070	900
THBD	ENSP00000315029	F2	ENSP00000308541	999
MRE11A*	ENSP00000325863	WRN	ENSP00000298139	924
NOS2A	ENSP00000327251	CSF2	ENSP00000296871	913
TLR4	ENSP00000346893	TIRAP*	ENSP00000279992	999
VEGFA	ENSP00000317598	CXCL10*	ENSP00000305651	905
NOS2A	ENSP00000327251	IL15	ENSP00000296545	912

Symbol	StringID	Symbol	StringID	CS
HSPD1	ENSP00000340019	CA2*	ENSP00000285379	956
RHOT1*	ENSP00000351132	HP	ENSP00000276297	900
ANGPTL4*	ENSP00000313114	LPL	ENSP00000309757	904
AGTR2*	ENSP00000325962	NOS3	ENSP00000297494	900
VLDLR	ENSP00000327160	LRPAP1*	ENSP00000296325	910
DCP2*	ENSP00000329359	DCP1A	ENSP00000294241	996
STAT1*	ENSP00000354394	AGTR1	ENSP00000273430	900
RHOBTB1*	ENSP00000350595	HP	ENSP00000276297	900
VEGFA	ENSP00000317598	PTEN*	ENSP00000304973	910
LEP	ENSP00000312652	LPL	ENSP00000309757	900
VEGFA	ENSP00000317598	IL13*	ENSP00000304915	921
FGG *	ENSP00000336829	ITGAM*	ENSP00000287497	982
TLR4	ENSP00000346893	CD40	ENSP00000279061	918
BCL2L11*	ENSP00000350311	HP	ENSP00000276297	914
TEK	ENSP00000346578	TM7SF2*	ENSP00000279262	900
NCF2	ENSP00000340837	HOXA10*	ENSP00000283921	910
SLC2A2	ENSP00000323568	EHMT1*	ENSP00000298728	900
RXRA*	ENSP00000335676	PPARG	ENSP00000287820	999
TLR4	ENSP00000346893	CD44*	ENSP00000278385	927
NOS2A	ENSP00000327251	VCAM1	ENSP00000294728	908
IGF2	ENSP00000348986	GPC3*	ENSP00000276212	973
RAC1*	ENSP00000348461	HP	ENSP00000276297	935
FBN1	ENSP00000325527	FBLN2*	ENSP00000295760	926
FBN1	ENSP00000325527	TGFBR2*	ENSP00000295754	905
HSD11B2 *	ENSP00000316786	CYP21A2*	ENSP00000303875	990
NRG1	ENSP00000349275	EGFR*	ENSP00000275493	981
FGFR2	ENSP00000350166	FGF18*	ENSP00000274625	996
IGF2	ENSP00000348986	IGFBP1	ENSP00000275525	976
IGF2	ENSP00000348986	IGFBP3*	ENSP00000275521	975
VEGFA	ENSP00000317598	IGF1	ENSP00000302665	929
BAIAP2*	ENSP00000316338	INSR	ENSP00000303830	977
ETS1*	ENSP00000324578	PF4	ENSP00000296029	910
VEGFA	ENSP00000317598	MAP2K1*	ENSP00000302486	906

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TCF12*	ENSP00000331057	USF1	ENSP00000289790	903
JUN*	ENSP00000314522	IRS1	ENSP00000304895	911
DCP2*	ENSP00000329359	ACE	ENSP00000290866	984
LEP	ENSP00000312652	FOS*	ENSP00000306245	904
HSD11B2 *	ENSP00000316786	HSD3B2*	ENSP00000302238	956
MMP1*	ENSP00000322788	ITGA2	ENSP00000296585	988
CSF1	ENSP00000327513	GAB3*	ENSP00000291575	908
RHOC*	ENSP00000345236	HP	ENSP00000276297	900
MYOCD*	ENSP00000341835	TAGLN	ENSP00000278968	906
GH1	ENSP00000312673	IRS1	ENSP00000304895	936
LEP	ENSP00000312652	IRS1	ENSP00000304895	917
HOXB4*	ENSP00000328928	USF1	ENSP00000289790	903
CYP11B2	ENSP00000325822	CYP11B1*	ENSP00000292427	968
MMP12*	ENSP00000320664	CSF2	ENSP00000296871	900
VEGFA	ENSP00000317598	HIF1AN*	ENSP00000299163	900
LEP	ENSP00000312652	INSR	ENSP00000303830	903
APOA4	ENSP00000350425	HSPG2*	ENSP00000270945	937
CBS	ENSP00000344460	PSPH*	ENSP00000275605	900
LEP	ENSP00000312652	TRH	ENSP00000303452	900
AGTR2*	ENSP00000325962	ACE	ENSP00000290866	936
NPPA	ENSP00000309540	FOS*	ENSP00000306245	920
SAA1	ENSP00000308762	IL8*	ENSP00000306512	900
GH1	ENSP00000312673	IGF1	ENSP00000302665	929
LEP	ENSP00000312652	IGF1	ENSP00000302665	912
IL8RB	ENSP00000319635	CXCL1*	ENSP00000296031	999
IL8RB	ENSP00000319635	PF4	ENSP00000296029	904
IL8RB	ENSP00000319635	PPBP*	ENSP00000296028	999
IL8RB	ENSP00000319635	CXCL5*	ENSP00000296027	998
IL8RB	ENSP00000319635	CXCL3*	ENSP00000296026	993
NPPA	ENSP00000309540	NPR1*	ENSP00000305386	997
F2	ENSP00000308541	FGA	ENSP00000306361	999
CRP	ENSP00000319435	ALB*	ENSP00000295897	900
CBS	ENSP00000344460	BHMT*	ENSP00000274353	966

Symbol	StringID	Symbol	StringID	CS
VEGFA	ENSP00000317598	NOS3	ENSP00000297494	915
HRAS*	ENSP00000309845	IRS1	ENSP00000304895	975
VEGFA	ENSP00000317598	ANGPT1*	ENSP00000297450	918
F2	ENSP00000308541	FGB *	ENSP00000306099	995
NCAM1*	ENSP00000318472	IL15	ENSP00000296545	900
GRB7*	ENSP00000310771	INSR	ENSP00000303830	940
THBD	ENSP00000315029	C4B*	ENSP00000299406	900
UBE2I*	ENSP00000348056	SLC2A1	ENSP00000270929	920
VEGFA	ENSP00000317598	CSF2	ENSP00000296871	921
GATA2	ENSP00000345681	SLC20A1*	ENSP00000272542	900
LPL	ENSP00000309757	CEL*	ENSP00000304021	967
NRG1	ENSP00000349275	ERBB2*	ENSP00000269571	995
CRP	ENSP00000319435	VCAM1	ENSP00000294728	900
THBD	ENSP00000315029	SERPINA5	ENSP00000298842	902
HRAS*	ENSP00000309845	INSR	ENSP00000303830	967
PTGS1	ENSP00000354612	ALOX5*	ENSP00000265455	975
IGF2	ENSP00000348986	IGFBP4*	ENSP00000269593	991
CSF3R*	ENSP00000355406	STAT3	ENSP00000264657	948
TRHR	ENSP00000309818	TRH	ENSP00000303452	998
TLR1	ENSP00000354932	ICAM1	ENSP00000264832	900
CXCL9*	ENSP00000354901	ICAM1	ENSP00000264832	900
IGF2	ENSP00000348986	TP53*	ENSP00000269305	916
VEGFA	ENSP00000317598	ALB*	ENSP00000295897	911
VEGFA	ENSP00000317598	IGFBP7*	ENSP00000295666	957
APS*	ENSP00000314151	SERPINA5	ENSP00000298842	983
STAT1*	ENSP00000354394	ICAM1	ENSP00000264832	904
FRAP1*	ENSP00000354587	STAT3	ENSP00000264657	970
VEGFA	ENSP00000317598	TGFA*	ENSP00000295400	916
RHOG*	ENSP00000339467	HP	ENSP00000276297	900
STAT1*	ENSP00000354394	STAT3	ENSP00000264657	995
FGFR2	ENSP00000350166	FGF7*	ENSP00000267843	999
F2	ENSP00000308541	GP9*	ENSP00000303942	900
FGA	ENSP00000306361	FGB *	ENSP00000306099	995

Symbol	StringID	Symbol	StringID	CS
CSF1	ENSP00000327513	CSF1R*	ENSP00000286301	999
LEP	ENSP00000312652	MC4R*	ENSP00000299766	904
KLK2	ENSP00000313581	SERPINA5	ENSP00000298842	943
SRC*	ENSP00000353950	STAT3	ENSP00000264657	986
PTGS1	ENSP00000354612	PLA2G4A*	ENSP00000264143	919
CD36	ENSP00000353555	ICAM1	ENSP00000264832	900
MAPK8*	ENSP00000353483	ICAM1	ENSP00000264832	900
VEGFA	ENSP00000317598	VCAM1	ENSP00000294728	912
FGF8*	ENSP00000321797	ACE	ENSP00000290866	906
MAPK8*	ENSP00000353483	STAT3	ENSP00000264657	970
CD43*	ENSP00000353238	ICAM1	ENSP00000264832	925
IGF2	ENSP00000348986	IGF1R*	ENSP00000268035	975
GTF2I*	ENSP00000322542	USF1	ENSP00000289790	990
PRKDC*	ENSP00000313420	WRN	ENSP00000298139	978
OPLAH*	ENSP00000353877	GCLM	ENSP00000263891	900
JUN*	ENSP00000314522	CSF2	ENSP00000296871	917
ABP1*	ENSP00000354193	DBH	ENSP00000263611	912
NRG1	ENSP00000349275	ERBB3*	ENSP00000267101	999
SNF1LK2*	ENSP00000305976	IRS1	ENSP00000304895	914
THBD	ENSP00000315029	PF4	ENSP00000296029	967
CIS4*	ENSP00000306939	INSR	ENSP00000303830	954
BCL2*	ENSP00000353498	IL1A	ENSP00000263339	903
LEP	ENSP00000312652	FXN*	ENSP00000297735	900
MAPK8*	ENSP00000353483	IL1A	ENSP00000263339	900
ENPP1	ENSP00000350964	PAPSS1*	ENSP00000265174	900
STIP1*	ENSP00000351646	STAT3	ENSP00000264657	913
ENSP00000352471*	ENSP00000352471	LCAT	ENSP00000264005	970
ENPP1	ENSP00000350964	BST1*	ENSP00000265016	928
EXO1*	ENSP00000311873	WRN	ENSP00000298139	916
PTPN6*	ENSP00000351285	STAT3	ENSP00000264657	910
HAND2*	ENSP00000352565	DBH	ENSP00000263611	907
FOS*	ENSP00000306245	TRH	ENSP00000303452	904
MMP12*	ENSP00000320664	USF1	ENSP00000289790	900

Symbol	StringID	Symbol	StringID	CS
CD36	ENSP00000353555	PPARA	ENSP00000262735	909
SMAD3*	ENSP00000332973	TAGLN	ENSP00000278968	903
ENPP1	ENSP00000350964	NNT*	ENSP00000264663	900
TRPM6*	ENSP00000354962	SREBF1	ENSP00000261646	900
CXCL11	ENSP00000306884	IFNB1*	ENSP00000302523	908
CEBPB*	ENSP00000305422	INSR	ENSP00000303830	900
LEP	ENSP00000312652	CART*	ENSP00000296777	912
CD36	ENSP00000353555	ITGA2B	ENSP00000262407	971
PLCD1*	ENSP00000335600	HP	ENSP00000276297	908
FUT4*	ENSP00000351602	SELP	ENSP00000263686	967
JUN*	ENSP00000314522	VCAM1	ENSP00000294728	909
FOS*	ENSP00000306245	IGF1	ENSP00000302665	906
FGFR2	ENSP00000350166	FGF10*	ENSP00000264664	999
FZD5*	ENSP00000354607	LRP6	ENSP00000261349	962
CD36	ENSP00000353555	ITGB3	ENSP00000262017	905
HSD11B2 *	ENSP00000316786	CYP11B1*	ENSP00000292427	991
IRS1	ENSP00000304895	INSR	ENSP00000303830	999
LPL	ENSP00000309757	LIPC	ENSP00000299022	910
FGFR2	ENSP00000350166	FGFB*	ENSP00000264498	999
NRG1	ENSP00000349275	ENSP00000265171*	ENSP00000265171	976
GAD1*	ENSP00000350928	GCLM	ENSP00000263891	900
ENSP00000304701*	ENSP00000304701	INSR	ENSP00000303830	981
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LPL	ENSP00000309757	PNLIPRP1*	ENSP00000298769	915
CD47*	ENSP00000355361	THBS1	ENSP00000260356	999
FGFR2	ENSP00000350166	CBL*	ENSP00000264033	960
NCOA6*	ENSP00000351894	PPARA	ENSP00000262735	976
ADIPOQ	ENSP00000320709	APPL*	ENSP00000288266	907
PTGS1	ENSP00000354612	CYP2C9*	ENSP00000260682	916
CSF1	ENSP00000327513	PTH*	ENSP00000282091	904
NCOA1*	ENSP00000320940	PPARG	ENSP00000287820	999
SELE	ENSP00000331736	CD44*	ENSP00000278385	909
MAPKAPK3*	ENSP00000350639	IL1A	ENSP00000263339	900

Symbol	StringID	Symbol	StringID	CS
TLR1	ENSP00000354932	TLR2	ENSP00000260010	994
IRS1	ENSP00000304895	IGF1	ENSP00000302665	992
IRS1	ENSP00000304895	UBTF*	ENSP00000302640	977
FUT4*	ENSP00000351602	ITGA2B	ENSP00000262407	900
NPPA	ENSP00000309540	AQP3*	ENSP00000297991	900
ENSP00000352471*	ENSP00000352471	SCARB1	ENSP00000261693	967
CSNK1E*	ENSP00000352929	LRP6	ENSP00000261349	904
RAC1*	ENSP00000348461	STAT3	ENSP00000264657	983
PTPRT*	ENSP00000348408	STAT3	ENSP00000264657	900
F2	ENSP00000308541	SERPINA5	ENSP00000298842	934
TLR10*	ENSP00000354459	TLR2	ENSP00000260010	974
FAS1*	ENSP00000347979	ICAM1	ENSP00000264832	903
ENSP00000350005*	ENSP00000350005	GIPR	ENSP00000263281	994
IGF2	ENSP00000348986	CTCF*	ENSP00000264010	935
PKACA*	ENSP00000309591	NOS3	ENSP00000297494	900
ADC*	ENSP00000309580	NOS3	ENSP00000297494	900
FAS1*	ENSP00000347979	STAT3	ENSP00000264657	913
NCF2	ENSP00000340837	AKT1*	ENSP00000270202	900
F2R	ENSP00000321326	GNAQ*	ENSP00000286548	960
CD36	ENSP00000353555	THBS1	ENSP00000260356	998
IFI27*	ENSP00000347688	STAT3	ENSP00000264657	900
TEK	ENSP00000346578	ELF2*	ENSP00000265495	912
INSR	ENSP00000303830	IGF1	ENSP00000302665	936
IRAK4*	ENSP00000349096	IL1A	ENSP00000263339	908
PAQR2*	ENSP00000349616	PPARA	ENSP00000262735	967
TLR1	ENSP00000354932	IL6	ENSP00000258743	917
ITGB1*	ENSP00000352630	THBS1	ENSP00000260356	981
NOS2A	ENSP00000327251	IL18*	ENSP00000280357	909
LEP	ENSP00000312652	HCRT*	ENSP00000293330	900
MAP2K5*	ENSP00000346493	STAT3	ENSP00000264657	900
STAT1*	ENSP00000354394	IL6	ENSP00000258743	919
TRH	ENSP00000303452	ENSP00000302150*	ENSP00000302150	907
ENPP1	ENSP00000350964	GYS2*	ENSP00000261195	900

Symbol	StringID	Symbol	StringID	CS
IRS1	ENSP00000304895	CRK*	ENSP00000300574	999
FAS1*	ENSP00000347979	IL1A	ENSP00000263339	916
PTHR1	ENSP00000324788	PTH*	ENSP00000282091	994
GP6*	ENSP00000308782	ITGA2	ENSP00000296585	900
HIF1A*	ENSP00000338018	SLC2A1	ENSP00000270929	904
CYB5*	ENSP00000341625	CYP1A1	ENSP00000268062	951
NCOR2*	ENSP00000348551	PPARA	ENSP00000262735	957
F2	ENSP00000308541	F2RL2*	ENSP00000296641	951
VEGFA	ENSP00000317598	KIT*	ENSP00000288135	914
GATA2	ENSP00000345681	STAT3	ENSP00000264657	952
ATP7A*	ENSP00000345728	ENSP00000264613*	ENSP00000264613	968
CD36	ENSP00000353555	IL6	ENSP00000258743	918
RHOA*	ENSP00000354222	AGT	ENSP00000258224	901
TEK	ENSP00000346578	GRB14*	ENSP00000263915	972
BCL2*	ENSP00000353498	IL6	ENSP00000258743	915
MAPK8*	ENSP00000353483	IL6	ENSP00000258743	904
IGF1	ENSP00000302665	ENSP00000302150*	ENSP00000302150	911
TEK	ENSP00000346578	EPAS1*	ENSP00000263734	917
TLR4	ENSP00000346893	IL1B*	ENSP00000263341	900
TLR4	ENSP00000346893	IL1A	ENSP00000263339	928
GRB2*	ENSP00000348125	ITGA2B	ENSP00000262407	914
TLR4	ENSP00000346893	NOX4*	ENSP00000263317	954
INSR	ENSP00000303830	CRK*	ENSP00000300574	967
NOS2A	ENSP00000327251	CD40	ENSP00000279061	909
FCGR1A*	ENSP00000307399	CSF2	ENSP00000296871	900
RET*	ENSP00000344798	STAT3	ENSP00000264657	998
IGF1	ENSP00000302665	IGFBP6*	ENSP00000301464	955
TLR4	ENSP00000346893	MAPK3*	ENSP00000263025	905
GATA2	ENSP00000345681	KDR*	ENSP00000263923	903
LPL	ENSP00000309757	PPAP2B*	ENSP00000294390	900
PTGS1	ENSP00000354612	CYP2J2	ENSP00000257149	914
RAC1*	ENSP00000348461	CYBA	ENSP00000261623	999
NOXO1*	ENSP00000348435	CYBA	ENSP00000261623	973

Symbol	StringID	Symbol	StringID	CS
IL17*	ENSP00000344192	ICAM1	ENSP00000264832	902
MPO	ENSP00000344419	ENSP00000264613*	ENSP00000264613	967
TEK	ENSP00000346578	ANGPT4*	ENSP00000262924	991
GPT2*	ENSP00000345282	GCLM	ENSP00000263891	900
RAD52*	ENSP00000305577	WRN	ENSP00000298139	967
CD163*	ENSP00000352071	IL6	ENSP00000258743	908
IL17*	ENSP00000344192	STAT3	ENSP00000264657	914
FEN1*	ENSP00000305480	WRN	ENSP00000298139	996
SOD2	ENSP00000337127	SOD1*	ENSP00000270142	977
ADAM17*	ENSP00000309968	CXCL16	ENSP00000293778	901
TGFBI	ENSP00000306306	COL1A2*	ENSP00000297268	929
GLUL*	ENSP00000344958	GCLM	ENSP00000263891	900
CBS	ENSP00000344460	MTR*	ENSP00000264178	988
IL8*	ENSP00000306512	CSF2	ENSP00000296871	905
CX3CR1	ENSP00000351059	IL10*	ENSP00000259152	905
RXRA*	ENSP00000335676	ENSP00000271002*	ENSP00000271002	902
LEP	ENSP00000312652	AGRP*	ENSP00000290953	928
TLR7*	ENSP00000349736	TLR2	ENSP00000260010	940
DNCL2A*	ENSP00000349679	TLR2	ENSP00000260010	900
FOS*	ENSP00000306245	CSF2	ENSP00000296871	918
EDNRB	ENSP00000343922	ECE1	ENSP00000264205	907
NPR1*	ENSP00000305386	NOS3	ENSP00000297494	964
IL7R*	ENSP00000306157	IL15	ENSP00000296545	933
IRAK4*	ENSP00000349096	TLR2	ENSP00000260010	992
UBTF*	ENSP00000302640	MMP3	ENSP00000299855	900
DNM1*	ENSP00000345680	SLC4A1	ENSP00000262418	900
POLR1C*	ENSP00000304153	WRN	ENSP00000298139	959
ENSP00000343488*	ENSP00000343488	GCLM	ENSP00000263891	900
TLR4	ENSP00000346893	IRAK3*	ENSP00000261233	924
RAC1*	ENSP00000348461	TLR2	ENSP00000260010	961
CYP11B2	ENSP00000325822	CYP17A1*	ENSP00000278017	949
IGF2	ENSP00000348986	NOVH*	ENSP00000259526	905
IL13*	ENSP00000304915	CSF2	ENSP00000296871	925

Symbol	StringID	Symbol	StringID	CS
VEGFA	ENSP00000317598	ADAMTS1*	ENSP00000284984	971
RDX*	ENSP00000342830	SLC9A1	ENSP00000263980	978
PLD1*	ENSP00000342793	LCAT	ENSP00000264005	900
TLR7*	ENSP00000349736	IL6	ENSP00000258743	919
COL5A1*	ENSP00000347458	THBS1	ENSP00000260356	910
HSPD1	ENSP00000340019	HSPA5*	ENSP00000265959	968
PROZ*	ENSP00000344458	SLC4A1	ENSP00000262418	900
ENPP1	ENSP00000350964	RFK*	ENSP00000257452	900
CD14*	ENSP00000304236	CSF2	ENSP00000296871	925
TLR4	ENSP00000346893	CASP1*	ENSP00000260309	901
PTPN11*	ENSP00000340944	STAT3	ENSP00000264657	970
CTLA4*	ENSP00000303939	CSF2	ENSP00000296871	926
GATM*	ENSP00000303263	NOS3	ENSP00000297494	900
TLR4	ENSP00000346893	TLR2	ENSP00000260010	938
PTK2B*	ENSP00000332816	SLC2A1	ENSP00000270929	946
TLR4	ENSP00000346893	RIPK1*	ENSP00000259808	990
KLK1	ENSP00000301420	SERPINA5	ENSP00000298842	970
HTATIP*	ENSP00000340330	STAT3	ENSP00000264657	955
PDZK1*	ENSP00000344147	SCARB1	ENSP00000261693	998
FAS1*	ENSP00000347979	IL6	ENSP00000258743	925
NPPA	ENSP00000309540	ACE	ENSP00000290866	933
ITGB2*	ENSP00000303242	CSF2	ENSP00000296871	900
RAC1*	ENSP00000348461	AGT	ENSP00000258224	903
LRP8	ENSP00000303634	LRPAP1*	ENSP00000296325	974
TLR4	ENSP00000346893	IL10*	ENSP00000259152	932
FOSL1*	ENSP00000310170	USF1	ENSP00000289790	964
IL13*	ENSP00000304915	VCAM1	ENSP00000294728	970
UCP2*	ENSP00000312029	PPARG	ENSP00000287820	904
MAOA*	ENSP00000340684	DBH	ENSP00000263611	959
LPL	ENSP00000309757	APOA2*	ENSP00000289906	988
ADIPOR1	ENSP00000341785	PPARA	ENSP00000262735	975
CYP7A1*	ENSP00000301645	ABCA1	ENSP00000297693	905
HMGB1*	ENSP00000345347	TLR2	ENSP00000260010	967

Symbol	StringID	Symbol	StringID	CS
CYP3A4	ENSP00000337915	ABCB1*	ENSP00000265724	900
IRS1	ENSP00000304895	JAK1*	ENSP00000294423	997
VIL2*	ENSP00000338934	ICAM1	ENSP00000264832	974
TLR4	ENSP00000346893	IL6	ENSP00000258743	925
VEGFA	ENSP00000317598	GJA1*	ENSP00000282561	906
CNTF*	ENSP00000339030	STAT3	ENSP00000264657	900
IFNB1*	ENSP00000302523	IL15	ENSP00000296545	921
PAX2*	ENSP00000347385	AGT	ENSP00000258224	909
PTGS1	ENSP00000354612	CYP2E1*	ENSP00000252945	900
NOXA1*	ENSP00000342848	CYBA	ENSP00000261623	915
VEGFA	ENSP00000317598	FLT1*	ENSP00000282397	999
IL6ST*	ENSP00000338799	STAT3	ENSP00000264657	938
SREBF2*	ENSP00000355169	LDLR	ENSP00000252444	906
FCGR2B*	ENSP00000351497	APCS	ENSP00000255040	918
PTHLH*	ENSP00000346398	IL6	ENSP00000258743	995
DDC*	ENSP00000339928	DBH	ENSP00000263611	972
GRB2*	ENSP00000348125	PDGFRA	ENSP00000257290	952
FANCB*	ENSP00000326819	FABP2	ENSP00000274024	900
BDKRB2*	ENSP00000307713	ACE	ENSP00000290866	952
VIL2*	ENSP00000338934	SLC9A1	ENSP00000263980	934
GGTL3*	ENSP00000338964	GCLM	ENSP00000263891	900
MMP13*	ENSP00000339672	IL1A	ENSP00000263339	900
CXCR6*	ENSP00000304414	CXCL16	ENSP00000293778	997
IGF1	ENSP00000302665	TGFA*	ENSP00000295400	923
ITGB2*	ENSP00000303242	VCAM1	ENSP00000294728	904
VEGFA	ENSP00000317598	PIGF*	ENSP00000281382	921
LPL	ENSP00000309757	DGKI*	ENSP00000288490	900
CYP11B2	ENSP00000325822	SRD5A1*	ENSP00000274192	900
IKBKB*	ENSP00000339151	IL1A	ENSP00000263339	905
ENSP00000353540*	ENSP00000353540	APOE	ENSP00000252486	985
ACACB*	ENSP00000341044	SREBF1	ENSP00000261646	904
FGG *	ENSP00000336829	F13A1	ENSP00000264870	960
PTGS1	ENSP00000354612	ALOX12*	ENSP00000251535	927

Symbol	StringID	Symbol	StringID	CS
NCF2	ENSP00000340837	CYBA	ENSP00000261623	999
GGT1*	ENSP00000337876	GCLM	ENSP00000263891	900
SREBF2*	ENSP00000355169	INS	ENSP00000250971	900
APOA4	ENSP00000350425	SDC1*	ENSP00000254351	900
GATA2	ENSP00000345681	LMO2*	ENSP00000257818	914
INSR	ENSP00000303830	STAT5B*	ENSP00000293328	964
IGF1	ENSP00000302665	JAK1*	ENSP00000294423	910
NOS2A	ENSP00000327251	CALM1*	ENSP00000272298	900
CCL11	ENSP00000302234	VCAM1	ENSP00000294728	902
FOS*	ENSP00000306245	ACE	ENSP00000290866	919
EDN3*	ENSP00000337128	ECE1	ENSP00000264205	912
IL17*	ENSP00000344192	IL6	ENSP00000258743	992
PTDSS1*	ENSP00000337331	LCAT	ENSP00000264005	900
VEGFA	ENSP00000317598	IL18*	ENSP00000280357	921
APLN*	ENSP00000354758	INS	ENSP00000250971	900
ENSP00000352471*	ENSP00000352471	APOE	ENSP00000252486	942
FRAP1*	ENSP00000354587	INS	ENSP00000250971	900
MFAP5*	ENSP00000348957	JAG1	ENSP00000254958	939
TLR4	ENSP00000346893	IRAK2*	ENSP00000256458	967
RHOT2*	ENSP00000321971	HP	ENSP00000276297	900
ALDH4A1*	ENSP00000336944	GCLM	ENSP00000263891	900
PDGFA*	ENSP00000345559	PDGFRA	ENSP00000257290	999
FSHR*	ENSP00000306780	USF1	ENSP00000289790	908
SRC*	ENSP00000353950	INS	ENSP00000250971	900
DPP4*	ENSP00000353731	INS	ENSP00000250971	900
NCF2	ENSP00000340837	NOX5*	ENSP00000260364	900
CD36	ENSP00000353555	INS	ENSP00000250971	900
ENSP00000353540*	ENSP00000353540	INS	ENSP00000250971	900
CBS	ENSP00000344460	ENSP00000257549*	ENSP00000257549	921
MAPK8*	ENSP00000353483	INS	ENSP00000250971	900
GATA2	ENSP00000345681	TSHB*	ENSP00000256592	907
VEGFA	ENSP00000317598	TM7SF2*	ENSP00000279262	900
CYP11B2	ENSP00000325822	ENSP00000272190*	ENSP00000272190	900

Symbol	StringID	Symbol	StringID	CS
VEGFA	ENSP00000317598	CD40	ENSP00000279061	912
CHP*	ENSP00000335632	SLC9A1	ENSP00000263980	902
THRAP4*	ENSP00000337205	PPARA	ENSP00000262735	963
LPA	ENSP00000321334	EGFR*	ENSP00000275493	900
PROS1	ENSP00000330021	FURIN*	ENSP00000268171	900
F2R	ENSP00000321326	GNA12*	ENSP00000275364	997
APOA4	ENSP00000350425	APOC1*	ENSP00000252491	903
APOA4	ENSP00000350425	APOC4*	ENSP00000252489	979
APOA4	ENSP00000350425	APOE	ENSP00000252486	932
VEGFA	ENSP00000317598	ENSP00000278568*	ENSP00000278568	906
MAP2*	ENSP00000352460	INS	ENSP00000250971	900
TEK	ENSP00000346578	ANGPTL3*	ENSP00000255208	911
VEGFA	ENSP00000317598	CD44*	ENSP00000278385	908
HEY1*	ENSP00000346761	JAG1	ENSP00000254958	907
FGG *	ENSP00000336829	ITGA2B	ENSP00000262407	969
NOS2A	ENSP00000327251	BCKDHA*	ENSP00000269980	900
NCF4*	ENSP00000337605	CYBA	ENSP00000261623	998
STAT5A*	ENSP00000341208	IL6	ENSP00000258743	914
FASN*	ENSP00000304592	USF1	ENSP00000289790	915
CSF1	ENSP00000327513	TNFRSF11A*	ENSP00000269485	932
FGG *	ENSP00000336829	ITGB3	ENSP00000262017	977
WRN	ENSP00000298139	TIPARP*	ENSP00000295924	900
CALU*	ENSP00000345931	APCS	ENSP00000255040	987
GSTM3*	ENSP00000354357	GSTT1	ENSP00000248935	935
RXRA*	ENSP00000335676	PPARA	ENSP00000262735	999
COL1A2*	ENSP00000297268	ITGA2	ENSP00000296585	986
IRS1	ENSP00000304895	PIK3CB*	ENSP00000289153	993
DDIT3*	ENSP00000340671	IL6	ENSP00000258743	900
FOS*	ENSP00000306245	PPARG	ENSP00000287820	900
F2R	ENSP00000321326	GZMA*	ENSP00000274306	950
CSF2	ENSP00000296871	IL3*	ENSP00000296870	900
IRS1	ENSP00000304895	NCK1*	ENSP00000288986	900
CSF2	ENSP00000296871	TLR3*	ENSP00000296795	909

Symbol	StringID	Symbol	StringID	CS
HSD11B2 *	ENSP00000316786	CYP17A1*	ENSP00000278017	902
SLC2A4	ENSP00000320935	PIK3R1*	ENSP00000274335	954
VEGFA	ENSP00000317598	NTRK2*	ENSP00000277120	900
NCF2	ENSP00000340837	AGT	ENSP00000258224	908
TLR5*	ENSP00000340089	IL6	ENSP00000258743	922
LPL	ENSP00000309757	DGKE*	ENSP00000284061	900
CD86*	ENSP00000332049	ICAM1	ENSP00000264832	900
NOS2A	ENSP00000327251	IRF8*	ENSP00000268638	908
MMP13*	ENSP00000339672	IL6	ENSP00000258743	905
SIGIRR*	ENSP00000333656	IL1A	ENSP00000263339	900
ENSP00000350005*	ENSP00000350005	INS	ENSP00000250971	907
ENSP00000349960*	ENSP00000349960	INS	ENSP00000250971	900
GATA2	ENSP00000345681	RARA*	ENSP00000254066	976
NOS3	ENSP00000297494	SGCB*	ENSP00000295211	900
PRKCD*	ENSP00000331602	STAT3	ENSP00000264657	985
FES*	ENSP00000331504	STAT3	ENSP00000264657	984
IRAK1*	ENSP00000333139	IL1A	ENSP00000263339	919
PTPN1*	ENSP00000349544	INS	ENSP00000250971	900
CNTF*	ENSP00000339030	IL6	ENSP00000258743	900
IGF2R*	ENSP00000349437	INS	ENSP00000250971	913
IL6ST*	ENSP00000338799	IL6	ENSP00000258743	999
CIB1*	ENSP00000333873	ITGA2B	ENSP00000262407	923
MME*	ENSP00000353679	EDN2	ENSP00000247589	933
SOD2	ENSP00000337127	TFAP2A*	ENSP00000259733	900
PLD1*	ENSP00000342793	PNMT	ENSP00000255389	900
F3	ENSP00000334145	F7	ENSP00000261967	999
RHOJ*	ENSP00000316729	HP	ENSP00000276297	900
VEGFA	ENSP00000317598	EGFR*	ENSP00000275493	912
IGF2	ENSP00000348986	CDKN1C*	ENSP00000250707	900
DDX41*	ENSP00000330349	ICAM1	ENSP00000264832	900
LEPR	ENSP00000330393	STAT3	ENSP00000264657	971
PDGFB*	ENSP00000330382	STAT3	ENSP00000264657	915
SOCS3*	ENSP00000330341	STAT3	ENSP00000264657	922

Symbol	StringID	Symbol	StringID	CS
IL15	ENSP00000296545	FCGR3A*	ENSP00000294800	900
AGTRAP*	ENSP00000319713	AGTR1	ENSP00000273430	978
F5	ENSP00000354631	F10	ENSP00000246496	995
TAT*	ENSP00000348234	INS	ENSP00000250971	900
GRB2*	ENSP00000348125	INS	ENSP00000250971	900
SELE	ENSP00000331736	IL1A	ENSP00000263339	909
FAS1*	ENSP00000347979	INS	ENSP00000250971	900
IL15	ENSP00000296545	JAK1*	ENSP00000294423	904
HIF1A*	ENSP00000338018	AGT	ENSP00000258224	917
PROS1	ENSP00000330021	C4BPA*	ENSP00000264304	996
HDAC3*	ENSP00000302967	PPARG	ENSP00000287820	961
NFKB2*	ENSP00000337001	IL6	ENSP00000258743	909
GP1BA	ENSP00000329380	F11	ENSP00000264691	996
SOCS1*	ENSP00000329418	STAT3	ENSP00000264657	909
IL1R2*	ENSP00000330959	IL1A	ENSP00000263339	994
ENSP00000337459*	ENSP00000337459	AGT	ENSP00000258224	913
F8*	ENSP00000353393	F10	ENSP00000246496	998
GGTLA1*	ENSP00000330080	GCLM	ENSP00000263891	900
GATA4*	ENSP00000334458	CYP19A1	ENSP00000260433	919
PROS1	ENSP00000330021	TYRO3*	ENSP00000263798	919
P4HB*	ENSP00000327801	MTTP	ENSP00000265517	900
SHC1*	ENSP00000336919	AGT	ENSP00000258224	910
SOCS3*	ENSP00000330341	IL1A	ENSP00000263339	900
CALR*	ENSP00000320866	SLC2A1	ENSP00000270929	942
CDC42*	ENSP00000314458	HP	ENSP00000276297	953
TAP1*	ENSP00000320676	SLC2A1	ENSP00000270929	900
LCK*	ENSP00000328213	STAT3	ENSP00000264657	954
GP1BA	ENSP00000329380	SELP	ENSP00000263686	905
RPS6*	ENSP00000346006	INS	ENSP00000250971	900
PF4	ENSP00000296029	CCL5*	ENSP00000293272	907
AHRR*	ENSP00000323816	CYP1A1	ENSP00000268062	905
CSF1	ENSP00000327513	ICAM1	ENSP00000264832	900
SLC2A4	ENSP00000320935	AKT1*	ENSP00000270202	980

Symbol	StringID	Symbol	StringID	CS
IRS1	ENSP00000304895	PRKCA*	ENSP00000284384	913
FIP1L1*	ENSP00000336752	PDGFRA	ENSP00000257290	921
IRAK1*	ENSP00000333139	TLR2	ENSP00000260010	997
IGF2	ENSP00000348986	GFER*	ENSP00000248114	900
PITG2*	ENSP00000344936	INS	ENSP00000250971	900
PTGS1	ENSP00000354612	PTGIS	ENSP00000244043	970
PPARBP*	ENSP00000300651	PPARG	ENSP00000287820	957
NOS3	ENSP00000297494	ACE	ENSP00000290866	907
LRP8	ENSP00000303634	APP*	ENSP00000284981	909
LEPR	ENSP00000330393	SNX1*	ENSP00000261889	942
CSF1	ENSP00000327513	PLA2G4A*	ENSP00000264143	931
ENSP00000338695*	ENSP00000338695	PNMT	ENSP00000255389	900
ENPP1	ENSP00000350964	NADK*	ENSP00000246422	900
CSF1	ENSP00000327513	CBL*	ENSP00000264033	991
LEP	ENSP00000312652	CRH*	ENSP00000276571	919
GLUD2*	ENSP00000327589	GCLM	ENSP00000263891	900
MTHFR	ENSP00000315965	AMT*	ENSP00000273588	904
BGN*	ENSP00000342318	APOE	ENSP00000252486	900
INSR	ENSP00000303830	PRKCA*	ENSP00000284384	911
RNF36*	ENSP00000332284	TLR2	ENSP00000260010	900
SLC2A2	ENSP00000323568	IPF1*	ENSP00000266950	969
SYK*	ENSP00000326032	STAT3	ENSP00000264657	909
HNF4A*	ENSP00000343807	INS	ENSP00000250971	900
VEGFA	ENSP00000317598	MCL1*	ENSP00000271648	922
CYP11B2	ENSP00000325822	POMC*	ENSP00000264708	921
CSF1	ENSP00000327513	IL1A	ENSP00000263339	910
STAT5A*	ENSP00000341208	EPO	ENSP00000252723	900
NOS2A	ENSP00000327251	IL1B*	ENSP00000263341	903
NOS2A	ENSP00000327251	IL1A	ENSP00000263339	904
SP1*	ENSP00000329357	SREBF1	ENSP00000261646	930
IRS2*	ENSP00000329289	SREBF1	ENSP00000261646	916
ADIPOQ	ENSP00000320709	CDH13*	ENSP00000268613	970
RELN*	ENSP00000341153	APOE	ENSP00000252486	926

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TLR4	ENSP00000346893	ENSP00000248244*	ENSP00000248244	994
GP1BA	ENSP00000329380	VWF*	ENSP00000261405	999
LPL	ENSP00000309757	PNLIP*	ENSP00000277888	924
NOS2A	ENSP00000327251	MAPK3*	ENSP00000263025	903
CD28*	ENSP00000324890	ICAM1	ENSP00000264832	904
INSR	ENSP00000303830	HNRPU*	ENSP00000283179	900
KEL*	ENSP00000347409	EDN2	ENSP00000247589	931
RNF36*	ENSP00000332284	IL6	ENSP00000258743	900
NRIP1*	ENSP00000327213	PPARA	ENSP00000262735	992
IGF2	ENSP00000348986	UROD*	ENSP00000246337	928
PTK2B*	ENSP00000332816	AGT	ENSP00000258224	918
NOS2A	ENSP00000327251	SLC9A3R1*	ENSP00000262613	943
MEF2A*	ENSP00000346389	KLF2	ENSP00000248071	900
TH*	ENSP00000325831	DBH	ENSP00000263611	900
NPY1R	ENSP00000354652	NPY*	ENSP00000242152	999
VEGFA	ENSP00000317598	AKT1*	ENSP00000270202	909
PTP4A3*	ENSP00000332274	AGT	ENSP00000258224	935
ADIPOR1	ENSP00000341785	INS	ENSP00000250971	900
A2M*	ENSP00000323929	STAT3	ENSP00000264657	900
NQO1*	ENSP00000319788	CYP1A1	ENSP00000268062	904
CYP2U1*	ENSP00000333212	CYP2J2	ENSP00000257149	907
NOS2A	ENSP00000327251	ARG2*	ENSP00000261783	972
STAT5A*	ENSP00000341208	INS	ENSP00000250971	900
PTK2*	ENSP00000341189	INS	ENSP00000250971	900
VEGFA	ENSP00000317598	ERBB2*	ENSP00000269571	914
VEGFA	ENSP00000317598	TNFRSF11A*	ENSP00000269485	923
PITPN11*	ENSP00000340944	INS	ENSP00000250971	900
A2M*	ENSP00000323929	TGFB2	ENSP00000264103	900
CSF2	ENSP00000296871	KIT*	ENSP00000288135	924
VEGFA	ENSP00000317598	TP53*	ENSP00000269305	916
IRS1	ENSP00000304895	FOXO1A*	ENSP00000280496	917
EIF4EBP1*	ENSP00000340691	INS	ENSP00000250971	900
PIGR*	ENSP00000294989	USF1	ENSP00000289790	915

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NOS2A	ENSP00000327251	SYT1*	ENSP00000261205	904
SOCS3*	ENSP00000330341	IL6	ENSP00000258743	927
FBN1	ENSP00000325527	TGFBR1*	ENSP00000262458	900
HIF1A*	ENSP00000338018	EPO	ENSP00000252723	918
SLC2A4	ENSP00000320935	SLC2A4RG*	ENSP00000266077	900
IGF1	ENSP00000302665	PTH*	ENSP00000282091	930
SLC2A4	ENSP00000320935	DAXX*	ENSP00000266000	943
CSF2	ENSP00000296871	ITGAM*	ENSP00000287497	900
RHOA*	ENSP00000354222	KALRN	ENSP00000240874	941
A2M*	ENSP00000323929	IL1A	ENSP00000263339	900
SOCS3*	ENSP00000330341	AGT	ENSP00000258224	931
MYD88*	ENSP00000323890	IL1A	ENSP00000263339	992
ITGAL*	ENSP00000321989	ICAM1	ENSP00000264832	999
RHOD*	ENSP00000308576	HP	ENSP00000276297	900
NOS2A	ENSP00000327251	IFI44*	ENSP00000260529	900
SOCS1*	ENSP00000329418	IL6	ENSP00000258743	928
MPO	ENSP00000344419	CANX*	ENSP00000247461	900
IL22*	ENSP00000329384	IL6	ENSP00000258743	915
FOXO3A*	ENSP00000339527	INS	ENSP00000250971	900
CYP11B2	ENSP00000325822	HSD11B1*	ENSP00000261465	930
FOS*	ENSP00000306245	ADM	ENSP00000278175	902
SOCS2*	ENSP00000339428	INS	ENSP00000250971	900
INSR	ENSP00000303830	PTS*	ENSP00000280362	900
ETS1*	ENSP00000324578	ITGA2B	ENSP00000262407	900
CSF1	ENSP00000327513	TLR2	ENSP00000260010	900
EDNRB	ENSP00000343922	EDN2	ENSP00000247589	983
CYP1A2*	ENSP00000342007	GSTT1	ENSP00000248935	954
IGF1	ENSP00000302665	QDPR*	ENSP00000281243	929
SLC2A4	ENSP00000320935	HADHSC*	ENSP00000265168	949
NOS2A	ENSP00000327251	TLR2	ENSP00000260010	911
VEGFA	ENSP00000317598	FGF7*	ENSP00000267843	902
UCP3*	ENSP00000323740	PPARA	ENSP00000262735	902
PDGFB*	ENSP00000330382	PDGFRA	ENSP00000257290	999

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MMP1*	ENSP00000322788	IL1A	ENSP00000263339	900
CSF2	ENSP00000296871	CSF1R*	ENSP00000286301	922
FGF1*	ENSP00000338548	INS	ENSP00000250971	900
GRB10*	ENSP00000338543	INS	ENSP00000250971	990
IGF1	ENSP00000302665	FOXO1A*	ENSP00000280496	916
NCF2	ENSP00000340837	RAC2*	ENSP00000249071	998
GATA2	ENSP00000345681	BMP4*	ENSP00000245451	906
HIF1A*	ENSP00000338018	INS	ENSP00000250971	900
FGFR2	ENSP00000350166	TWIST1*	ENSP00000242261	919
LPL	ENSP00000309757	DGKQ*	ENSP00000273814	900
MAPK8*	ENSP00000353483	EGR1	ENSP00000239938	900
NOS2A	ENSP00000327251	IL10*	ENSP00000259152	917
NR4A1*	ENSP00000353427	EGR1	ENSP00000239938	913
BRCA1*	ENSP00000337814	INS	ENSP00000250971	900
LPA	ENSP00000321334	LRP2*	ENSP00000263816	966
GSTM1	ENSP00000311469	EPHX1*	ENSP00000272167	932
NPPA	ENSP00000309540	CORIN*	ENSP00000273857	985
CSF1	ENSP00000327513	IL6	ENSP00000258743	927
VCAM1	ENSP00000294728	ITGAM*	ENSP00000287497	903
VEGFA	ENSP00000317598	INHBE*	ENSP00000266646	900
CEBPD*	ENSP00000319980	STAT3	ENSP00000264657	900
NOS2A	ENSP00000327251	IL6	ENSP00000258743	911
SLC2A4	ENSP00000320935	AKT3*	ENSP00000263826	929
SLC2A4	ENSP00000320935	EPAS1*	ENSP00000263734	906
NPPA	ENSP00000309540	AGTR1	ENSP00000273430	906
ARNT*	ENSP00000315637	CYP1A1	ENSP00000268062	905
RHOT1*	ENSP00000351132	KALRN	ENSP00000240874	900
SHC1*	ENSP00000336919	INS	ENSP00000250971	990
IL8RB	ENSP00000319635	CXCL2*	ENSP00000264492	999
LPA	ENSP00000321334	MAPK3*	ENSP00000263025	900
GP5*	ENSP00000319286	F11	ENSP00000264691	900
F2R	ENSP00000321326	GNA15*	ENSP00000262958	935
LYPLA1*	ENSP00000320043	LCAT	ENSP00000264005	900

Symbol	StringID	Symbol	StringID	CS
TFF2*	ENSP00000291526	USF1	ENSP00000289790	900
RHOBTB1*	ENSP00000350595	KALRN	ENSP00000240874	900
VEGFA	ENSP00000317598	NPTX2*	ENSP00000265634	914
ADIPOQ	ENSP00000320709	UCP1*	ENSP00000262999	900
IGF2	ENSP00000348986	PLG*	ENSP00000241669	951
NCOA1*	ENSP00000320940	PPARA	ENSP00000262735	995
VEGFA	ENSP00000317598	VEGF165R*	ENSP00000265371	999
PTGES2*	ENSP00000345341	PTGIS	ENSP00000244043	939
ADIPOQ	ENSP00000320709	PPARA	ENSP00000262735	900
NPPA	ENSP00000309540	ENSP00000272190*	ENSP00000272190	906
FN1*	ENSP00000323534	THBS1	ENSP00000260356	957
DDX41*	ENSP00000330349	JAG1	ENSP00000254958	900
VEGFA	ENSP00000317598	PAIP2*	ENSP00000265192	908
MYD88*	ENSP00000323890	TLR2	ENSP00000260010	998
AGTR2*	ENSP00000325962	AGT	ENSP00000258224	972
BKS*	ENSP00000317912	STAT3	ENSP00000264657	970
TH*	ENSP00000325831	AGT	ENSP00000258224	900
HLA-DQB1*	ENSP00000335243	INS	ENSP00000250971	987
CYP11B2	ENSP00000325822	AGT	ENSP00000258224	914
IL15	ENSP00000296545	CD8A*	ENSP00000283635	908
VEGFA	ENSP00000317598	ICAM1	ENSP00000264832	910
GHRL*	ENSP00000335074	INS	ENSP00000250971	900
ENSP00000304283*	ENSP00000304283	HP	ENSP00000276297	900
VEGFA	ENSP00000317598	POMC*	ENSP00000264708	923
VEGFA	ENSP00000317598	STAT3	ENSP00000264657	910
SOAT1*	ENSP00000317525	STAT3	ENSP00000264657	900
GYS1	ENSP00000317904	GBE1*	ENSP00000264326	968
VEGFA	ENSP00000317598	FGFB*	ENSP00000264498	918
IRS1	ENSP00000304895	EGFR*	ENSP00000275493	947
ENPP1	ENSP00000350964	PANK3*	ENSP00000239231	900
RAC1*	ENSP00000348461	KALRN	ENSP00000240874	990
ELN*	ENSP00000313565	FBLN5	ENSP00000267620	900
RHOH*	ENSP00000303689	HP	ENSP00000276297	900

Symbol	StringID	Symbol	StringID	CS
MTHFR	ENSP00000315965	MTHFD1L*	ENSP00000265365	900
VEGFA	ENSP00000317598	KDR*	ENSP00000263923	999
A2M*	ENSP00000323929	IL6	ENSP00000258743	904
MYD88*	ENSP00000323890	IL6	ENSP00000258743	928
FGFR2	ENSP00000350166	MSX2*	ENSP00000239243	909
F2	ENSP00000308541	F13B	ENSP00000271509	980
VEGFA	ENSP00000317598	EPAS1*	ENSP00000263734	919
GLS1*	ENSP00000317379	GCLM	ENSP00000263891	900
IFNAR2*	ENSP00000316407	STAT3	ENSP00000264657	950
FOS*	ENSP00000306245	AGTR1	ENSP00000273430	900
IGF2	ENSP00000348986	EGR1	ENSP00000239938	910
USF1	ENSP00000289790	TRIM63*	ENSP00000288918	900
GPHN*	ENSP00000303019	HP	ENSP00000276297	906
INSR	ENSP00000303830	IGFBP1	ENSP00000275525	906
IGF1	ENSP00000302665	GNRH1*	ENSP00000276414	928
IRS1	ENSP00000304895	PIK3R1*	ENSP00000274335	999
VEGFA	ENSP00000317598	IL1A	ENSP00000263339	908
HSPD1	ENSP00000340019	CLPP*	ENSP00000245816	948
PTGES*	ENSP00000342385	PTGIS	ENSP00000244043	966
GSTA1*	ENSP00000335620	GSTT1	ENSP00000248935	902
VEGFA	ENSP00000317598	MAPK3*	ENSP00000263025	903
PMI1*	ENSP00000318318	ITGA2B	ENSP00000262407	900
CSF2	ENSP00000296871	IL2RA*	ENSP00000281359	920
MMP1*	ENSP00000322788	IL6	ENSP00000258743	904
CRP	ENSP00000319435	VWF*	ENSP00000261405	900
VEGFA	ENSP00000317598	TIE1*	ENSP00000262908	924
GP1BA	ENSP00000329380	F12	ENSP00000253496	987
GSTM1	ENSP00000311469	CYP1A1	ENSP00000268062	949
ADMR*	ENSP00000300098	ADM	ENSP00000278175	967
MTHFR	ENSP00000315965	MTR*	ENSP00000264178	994
MTHFR	ENSP00000315965	MTHFD2*	ENSP00000264090	929
TRAF6*	ENSP00000316840	IL1A	ENSP00000263339	923
IL15	ENSP00000296545	IL2RA*	ENSP00000281359	933

Symbol	StringID	Symbol	StringID	CS
IGF1	ENSP00000302665	IGFBP1	ENSP00000275525	977
IGF1	ENSP00000302665	IGFBP3*	ENSP00000275521	999
IGF1	ENSP00000302665	EGFR*	ENSP00000275493	906
TNFRSF11B	ENSP00000297350	IL18*	ENSP00000280357	910
DF*	ENSP00000332139	INS	ENSP00000250971	900
HSD11B2 *	ENSP00000316786	AKR1C4*	ENSP00000263126	900
INSR	ENSP00000303830	PIK3R1*	ENSP00000274335	999
JUN*	ENSP00000314522	ICAM1	ENSP00000264832	900
FGFR2	ENSP00000350166	FGF23*	ENSP00000237837	994
JUN*	ENSP00000314522	STAT3	ENSP00000264657	972
EDNRA	ENSP00000315011	ECE1	ENSP00000264205	908
TLR4	ENSP00000346893	TNFSF11*	ENSP00000239849	920
ACTG1*	ENSP00000331514	INS	ENSP00000250971	900
VEGFA	ENSP00000317598	FLT4*	ENSP00000261937	943
LEPR	ENSP00000330393	SNX4*	ENSP00000251775	942
INSR	ENSP00000303830	AHSG*	ENSP00000273784	927
RHOC*	ENSP00000345236	KALRN	ENSP00000240874	900
SP1*	ENSP00000329357	APOE	ENSP00000252486	911
WT1*	ENSP00000331327	INS	ENSP00000250971	905
VEGFA	ENSP00000317598	PDGFRB*	ENSP00000261799	917
SP1*	ENSP00000329357	LDLR	ENSP00000252444	900
ADIPOQ	ENSP00000320709	IL10*	ENSP00000259152	906
DAB1*	ENSP00000329120	APOE	ENSP00000252486	924
DAB1*	ENSP00000329120	LDLR	ENSP00000252444	964
MMP14*	ENSP00000346201	EGR1	ENSP00000239938	904
WRN	ENSP00000298139	ATM*	ENSP00000278616	977
VEGFA	ENSP00000317598	VWF*	ENSP00000261405	912
F5	ENSP00000354631	PROC*	ENSP00000234071	998
LEPR	ENSP00000330393	INS	ENSP00000250971	900
PDGFA*	ENSP00000345559	EGR1	ENSP00000239938	904
SOCS3*	ENSP00000330341	INS	ENSP00000250971	900
IGF2	ENSP00000348986	GHRH*	ENSP00000237527	924
TOLLIP*	ENSP00000314733	IL1A	ENSP00000263339	977

Symbol	StringID	Symbol	StringID	CS
CSF2	ENSP00000296871	CD40	ENSP00000279061	924
HSD11B2 *	ENSP00000316786	HSD11B1*	ENSP00000261465	902
JUN*	ENSP00000314522	IL1A	ENSP00000263339	903
ADIPOQ	ENSP00000320709	AGT	ENSP00000258224	904
NOS2A	ENSP00000327251	ASS*	ENSP00000253004	914
ANGPT2	ENSP00000314897	TIE1*	ENSP00000262908	921
LEP	ENSP00000312652	POMC*	ENSP00000264708	921
IL15	ENSP00000296545	CD40	ENSP00000279061	919
LEP	ENSP00000312652	STAT3	ENSP00000264657	913
VEGFA	ENSP00000317598	IFI44*	ENSP00000260529	900
F2	ENSP00000308541	FURIN*	ENSP00000268171	900
KLK15*	ENSP00000314783	PPARA	ENSP00000262735	900
VEGFA	ENSP00000317598	THBS1	ENSP00000260356	915
HFE	ENSP00000311698	TFRC*	ENSP00000265238	997
INSR	ENSP00000303830	ACP1*	ENSP00000272067	926
SP1*	ENSP00000329357	INS	ENSP00000250971	900
CRP	ENSP00000319435	IL6	ENSP00000258743	912
IRS2*	ENSP00000329289	INS	ENSP00000250971	990
VCAM1	ENSP00000294728	IL18*	ENSP00000280357	918
ATF3*	ENSP00000344352	EGR1	ENSP00000239938	909
VLDLR	ENSP00000327160	APOC1*	ENSP00000252491	918
VLDLR	ENSP00000327160	APOE	ENSP00000252486	973
HFE	ENSP00000311698	PRO1400*	ENSP00000264998	900
USF1	ENSP00000289790	APP*	ENSP00000284981	902
IL15	ENSP00000296545	CD44*	ENSP00000278385	926
TBXAS1	ENSP00000338087	PTGIS	ENSP00000244043	970
RELA*	ENSP00000311508	ICAM1	ENSP00000264832	904
GYS1	ENSP00000317904	ENPP2*	ENSP00000259486	900
CSF1	ENSP00000327513	RAF1*	ENSP00000251849	913
CD36	ENSP00000353555	APOB	ENSP00000233242	904
ENSP00000353540*	ENSP00000353540	APOB	ENSP00000233242	990
INSR	ENSP00000303830	PSMA5*	ENSP00000271308	900
VEGFA	ENSP00000317598	MYC*	ENSP00000259523	900

Symbol	StringID	Symbol	StringID	CS
ENSP00000328364*	ENSP00000328364	INS	ENSP00000250971	907
PSEN1*	ENSP00000326366	APOE	ENSP00000252486	924
IRS1	ENSP00000304895	AKT1*	ENSP00000270202	971
TRAF6*	ENSP00000316840	TLR2	ENSP00000260010	923
F3	ENSP00000334145	F10	ENSP00000246496	998
CXCL16	ENSP00000293778	IL18*	ENSP00000280357	900
FZD8*	ENSP00000315042	LRP6	ENSP00000261349	960
LEP	ENSP00000312652	IL1A	ENSP00000263339	908
AOC3*	ENSP00000312326	DBH	ENSP00000263611	913
VCAM1	ENSP00000294728	CD40	ENSP00000279061	906
LEP	ENSP00000312652	UCP1*	ENSP00000262999	903
ENSP00000352471*	ENSP00000352471	APOB	ENSP00000233242	994
NOTCH4*	ENSP00000322395	JAG1	ENSP00000254958	986
LEP	ENSP00000312652	SIM1*	ENSP00000262901	900
VEGFA	ENSP00000317598	IL6	ENSP00000258743	920
FAS1*	ENSP00000347979	SELL	ENSP00000236147	900
KLK2	ENSP00000313581	SERPINA3*	ENSP00000261981	977
TLR1	ENSP00000354932	IL4*	ENSP00000231449	907
LEP	ENSP00000312652	PPARA	ENSP00000262735	900
PLA2G1B	ENSP00000312286	MAPK3*	ENSP00000263025	960
LPL	ENSP00000309757	MGLL*	ENSP00000265052	973
INSR	ENSP00000303830	AKT1*	ENSP00000270202	906
LPL	ENSP00000309757	DGKG*	ENSP00000265022	900
NPPA	ENSP00000309540	NPR3	ENSP00000265074	979
VCAM1	ENSP00000294728	CD44*	ENSP00000278385	914
RELA*	ENSP00000311508	IL1A	ENSP00000263339	916
LPL	ENSP00000309757	PPAP2A*	ENSP00000264775	900
VEGFA	ENSP00000317598	AGT	ENSP00000258224	923
IGF1	ENSP00000302665	SLC2A1	ENSP00000270929	908
UCP2*	ENSP00000312029	PPARA	ENSP00000262735	903
TRAF6*	ENSP00000316840	IL6	ENSP00000258743	909
ASMT*	ENSP00000305749	CYP1A1	ENSP00000268062	900
PRCP*	ENSP00000317362	AGT	ENSP00000258224	911

Symbol	StringID	Symbol	StringID	CS
GLS2*	ENSP00000310447	GCLM	ENSP00000263891	900
FOXC2*	ENSP00000326371	INS	ENSP00000250971	900
JUN*	ENSP00000314522	THBS1	ENSP00000260356	905
IL15	ENSP00000296545	IL2RG*	ENSP00000276110	999
TOLLIP*	ENSP00000314733	TLR2	ENSP00000260010	997
CD36	ENSP00000353555	IL4*	ENSP00000231449	915
LTA*	ENSP00000308936	ICAM1	ENSP00000264832	900
AGTR2*	ENSP00000325962	INS	ENSP00000250971	900
LPL	ENSP00000309757	DGKD*	ENSP00000264057	900
A2M*	ENSP00000323929	APOE	ENSP00000252486	969
IGF1	ENSP00000302665	AKT1*	ENSP00000270202	912
RHOG*	ENSP00000339467	KALRN	ENSP00000240874	955
MADCAM1*	ENSP00000346203	SELL	ENSP00000236147	930
NPPA	ENSP00000309540	ATF2*	ENSP00000264110	902
APOA4	ENSP00000350425	APOB	ENSP00000233242	990
F2	ENSP00000308541	F13A1	ENSP00000264870	993
IRS1	ENSP00000304895	IGF1R*	ENSP00000268035	998
BMX*	ENSP00000308774	STAT3	ENSP00000264657	927
LPL	ENSP00000309757	LRP2*	ENSP00000263816	967
ADC*	ENSP00000309580	GCLM	ENSP00000263891	900
HFE	ENSP00000311698	SLC11A2*	ENSP00000262051	904
IRS1	ENSP00000304895	RAD51*	ENSP00000267868	972
F2	ENSP00000308541	F11	ENSP00000264691	993
IGF2	ENSP00000348986	IGFBP5*	ENSP00000233813	989
IGF1	ENSP00000302665	IGFBP4*	ENSP00000269593	976
IGF2	ENSP00000348986	IGFBP2*	ENSP00000233809	997
TRH	ENSP00000303452	NCOR1*	ENSP00000268712	901
PECAM1*	ENSP00000354973	TNF	ENSP00000229681	900
TLR1	ENSP00000354932	TNF	ENSP00000229681	920
ALOX15B*	ENSP00000316970	CYP2J2	ENSP00000257149	900
APLN*	ENSP00000354758	TNF	ENSP00000229681	900
CRP	ENSP00000319435	APCS	ENSP00000255040	900
HMGCS1*	ENSP00000322706	LDLR	ENSP00000252444	942

Symbol	StringID	Symbol	StringID	CS
VEGFA	ENSP00000317598	VHL*	ENSP00000256474	991
FZD4*	ENSP00000311581	LRP6	ENSP00000261349	921
NFAT5*	ENSP00000354462	TNF	ENSP00000229681	986
VEGFA	ENSP00000317598	PGF*	ENSP00000256315	978
STAT1*	ENSP00000354394	TNF	ENSP00000229681	920
TEK	ENSP00000346578	ANGPTL1*	ENSP00000234816	990
JUN*	ENSP00000314522	IL6	ENSP00000258743	972
CASP3*	ENSP00000311032	SREBF1	ENSP00000261646	912
HFE	ENSP00000311698	SLC40A1*	ENSP00000261024	906
NOS3	ENSP00000297494	AGTR1	ENSP00000273430	923
VCAM1	ENSP00000294728	MSN*	ENSP00000275995	995
EDNRA	ENSP00000315011	AGT	ENSP00000258224	907
TLR1	ENSP00000354932	IFNG*	ENSP00000229135	914
SAA1	ENSP00000308762	IL1A	ENSP00000263339	900
LMNA*	ENSP00000310687	SREBF1	ENSP00000261646	915
SOD2	ENSP00000337127	ENSP00000241052*	ENSP00000241052	932
MMP17*	ENSP00000353767	TNF	ENSP00000229681	944
UCP3*	ENSP00000323740	INS	ENSP00000250971	900
FGF1*	ENSP00000338548	EGR1	ENSP00000239938	905
JUN*	ENSP00000314522	AGT	ENSP00000258224	916
SLC2A2	ENSP00000323568	INS	ENSP00000250971	902
BCL2*	ENSP00000353498	TNF	ENSP00000229681	924
MAPK8*	ENSP00000353483	TNF	ENSP00000229681	982
ALK*	ENSP00000306717	STAT3	ENSP00000264657	903
LPL	ENSP00000309757	DGKA*	ENSP00000262022	900
EPHX2*	ENSP00000315621	CYP2J2	ENSP00000257149	953
TLR4	ENSP00000346893	IL1R1*	ENSP00000233946	923
CCL4*	ENSP00000353298	TNF	ENSP00000229681	906
TLR8*	ENSP00000312082	TLR2	ENSP00000260010	939
LPA	ENSP00000321334	APOE	ENSP00000252486	902
IGF1	ENSP00000302665	IGF1R*	ENSP00000268035	999
LPA	ENSP00000321334	LDLR	ENSP00000252444	900
LEP	ENSP00000312652	BAAT*	ENSP00000259407	900

Symbol	StringID	Symbol	StringID	CS
CBS	ENSP00000344460	ENSP00000235407*	ENSP00000235407	997
FABP1*	ENSP00000295834	FABP2	ENSP00000274024	926
PLA2G1B	ENSP00000312286	PLAA*	ENSP00000259584	951
FOS*	ENSP00000306245	STAT3	ENSP00000264657	910
ALOX12B*	ENSP00000315167	CYP2J2	ENSP00000257149	900
LEP	ENSP00000312652	IL1RN*	ENSP00000259206	900
ETV5*	ENSP00000306894	SLC9A1	ENSP00000263980	900
NOS3	ENSP00000297494	CALM1*	ENSP00000272298	900
TRAP3*	ENSP00000352685	TNF	ENSP00000229681	999
RUNX2*	ENSP00000352514	TNF	ENSP00000229681	913
GP5*	ENSP00000319286	F12	ENSP00000253496	900
LPL	ENSP00000309757	LIPG	ENSP00000261292	907
NR2C2*	ENSP00000320447	APOE	ENSP00000252486	900
TLR9*	ENSP00000311174	TLR2	ENSP00000260010	943
VEGFA	ENSP00000317598	SERPINF1*	ENSP00000254722	912
LEP	ENSP00000312652	IL6	ENSP00000258743	918
CBS	ENSP00000344460	ENSP00000234677*	ENSP00000234677	943
CCL20*	ENSP00000351671	TNF	ENSP00000229681	922
F3	ENSP00000334145	PLG*	ENSP00000241669	905
IL13*	ENSP00000304915	ICAM1	ENSP00000264832	902
IL8*	ENSP00000306512	IL1A	ENSP00000263339	900
RUNX2*	ENSP00000352514	MGP	ENSP00000228938	909
CASP8*	ENSP00000351273	TNF	ENSP00000229681	924
F2	ENSP00000308541	VWF*	ENSP00000261405	900
FOS*	ENSP00000306245	IL1A	ENSP00000263339	904
IRF3*	ENSP00000310127	TLR2	ENSP00000260010	921
CX3CR1	ENSP00000351059	TNF	ENSP00000229681	908
HSPA4*	ENSP00000302961	SLC5A1	ENSP00000266088	900
GCGR*	ENSP00000345040	GCG	ENSP00000233604	999
RELA*	ENSP00000311508	IL6	ENSP00000258743	983
PRG2*	ENSP00000312134	AGT	ENSP00000258224	926
IRS1	ENSP00000304895	YWHAE*	ENSP00000264335	967
UBE2I*	ENSP00000348056	NR3C1	ENSP00000231509	951

Symbol	StringID	Symbol	StringID	CS
IGF2	ENSP00000348986	GHR*	ENSP00000230882	902
INSR	ENSP00000303830	ENSP00000265171*	ENSP00000265171	904
SLC2A4	ENSP00000320935	INS	ENSP00000250971	900
MAPKAPK3*	ENSP00000350639	TNF	ENSP00000229681	930
TLR9*	ENSP00000311174	IL6	ENSP00000258743	920
CTLA4*	ENSP00000303939	ICAM1	ENSP00000264832	900
CXCL10*	ENSP00000305651	IL1A	ENSP00000263339	900
ENSP00000353540*	ENSP00000353540	APOA5	ENSP00000227665	916
ADIPOQ	ENSP00000320709	INS	ENSP00000250971	900
IRS1	ENSP00000304895	PIK3CA*	ENSP00000263967	995
TLR1	ENSP00000354932	IL2*	ENSP00000226730	910
IRS1	ENSP00000304895	GRB14*	ENSP00000263915	932
IRS1	ENSP00000304895	SOS1*	ENSP00000263879	955
GP9*	ENSP00000303942	F11	ENSP00000264691	900
CEBPB*	ENSP00000305422	IL1A	ENSP00000263339	906
TLR6*	ENSP00000309253	TLR2	ENSP00000260010	994
PROS1	ENSP00000330021	C4BPB*	ENSP00000243611	958
FGA	ENSP00000306361	ITGA2B	ENSP00000262407	972
CCR3*	ENSP00000350003	TNF	ENSP00000229681	908
NOS3	ENSP00000297494	AKT1*	ENSP00000270202	999
OLR1	ENSP00000309124	TLR2	ENSP00000260010	917
PIAS3*	ENSP00000303630	STAT3	ENSP00000264657	999
TLR7*	ENSP00000349736	TNF	ENSP00000229681	922
TRH	ENSP00000303452	POMC*	ENSP00000264708	924
FGB *	ENSP00000306099	ITGA2B	ENSP00000262407	927
HNF4A*	ENSP00000343807	GCG	ENSP00000233604	900
NOS2A	ENSP00000327251	IRF1*	ENSP00000245414	911
ITGB2*	ENSP00000303242	ICAM1	ENSP00000264832	998
CEBPD*	ENSP00000319980	INS	ENSP00000250971	900
IL13*	ENSP00000304915	IL1A	ENSP00000263339	906
WRN	ENSP00000298139	TP53*	ENSP00000269305	998
TLR4	ENSP00000346893	IL4*	ENSP00000231449	918
JUNB*	ENSP00000303315	STAT3	ENSP00000264657	932

Symbol	StringID	Symbol	StringID	CS
FGA	ENSP00000306361	ITGB3	ENSP00000262017	971
VEGFA	ENSP00000317598	EPO	ENSP00000252723	913
IRS1	ENSP00000304895	SYP*	ENSP00000263233	912
INSR	ENSP00000303830	CBL*	ENSP00000264033	984
FGB *	ENSP00000306099	ITGB3	ENSP00000262017	962
IRS1	ENSP00000304895	MAPK3*	ENSP00000263025	994
ADRB2	ENSP00000305372	SLC9A3R1*	ENSP00000262613	992
INSR	ENSP00000303830	GRB14*	ENSP00000263915	996
LPL	ENSP00000309757	DGKB*	ENSP00000258767	900
FGFR2	ENSP00000350166	FGF6*	ENSP00000228837	999
IFNB1*	ENSP00000302523	ICAM1	ENSP00000264832	900
CD14*	ENSP00000304236	IL1A	ENSP00000263339	905
IRS1	ENSP00000304895	PIK3R3*	ENSP00000262741	999
IGF1	ENSP00000302665	STAT3	ENSP00000264657	910
PRI*	ENSP00000348515	TNF	ENSP00000229681	900
CCL11	ENSP00000302234	ICAM1	ENSP00000264832	900
SERPINB2	ENSP00000299502	RB1*	ENSP00000267163	971
LEPR	ENSP00000330393	NPY*	ENSP00000242152	919
CYP4A11*	ENSP00000311095	CYP2J2	ENSP00000257149	946
INSR	ENSP00000303830	SYP*	ENSP00000263233	900
PTAFR	ENSP00000301974	TYK2*	ENSP00000264818	906
ENSP00000302150*	ENSP00000302150	STAT3	ENSP00000264657	900
ITGB2*	ENSP00000303242	SELP	ENSP00000263686	900
HMGB1*	ENSP00000345347	NR3C1	ENSP00000231509	929
DEFB2*	ENSP00000303532	IL1A	ENSP00000263339	900
NPPA	ENSP00000309540	AGT	ENSP00000258224	934
FAS1*	ENSP00000347979	TNF	ENSP00000229681	932
INSR	ENSP00000303830	MAPK3*	ENSP00000263025	984
INSR	ENSP00000303830	GAB1*	ENSP00000262995	933
CD36	ENSP00000353555	COL1A1*	ENSP00000225964	978
SAA1	ENSP00000308762	IL6	ENSP00000258743	900
CD36	ENSP00000353555	CCL2*	ENSP00000225831	900
BGN*	ENSP00000342318	APOB	ENSP00000233242	965

Symbol	StringID	Symbol	StringID	CS
INSR	ENSP00000303830	PIK3R3*	ENSP00000262741	975
MMP3	ENSP00000299855	TIMP3*	ENSP00000266085	952
GYS1	ENSP00000317904	INS	ENSP00000250971	900
RTEL1*	ENSP00000347362	TNF	ENSP00000229681	900
ITGB1*	ENSP00000352630	VTN	ENSP00000226218	953
PROS1	ENSP00000330021	PLG*	ENSP00000241669	900
CD43*	ENSP00000353238	ICAM2	ENSP00000225760	900
NRG1	ENSP00000349275	PXN*	ENSP00000228307	900
IRS1	ENSP00000304895	ROCK1*	ENSP00000261535	967
DAPK3*	ENSP00000301264	STAT3	ENSP00000264657	900
IRS1	ENSP00000304895	NRAS*	ENSP00000261444	931
F2R	ENSP00000321326	KLF2	ENSP00000248071	900
VEGFA	ENSP00000317598	INS	ENSP00000250971	900
IL8*	ENSP00000306512	TLR2	ENSP00000260010	900
FASN*	ENSP00000304592	SREBF1	ENSP00000261646	917
NFATC2*	ENSP00000346980	TNF	ENSP00000229681	957
TLR4	ENSP00000346893	TNF	ENSP00000229681	931
CSF2	ENSP00000296871	ITGAX*	ENSP00000268296	902
GALR1	ENSP00000299727	GAL*	ENSP00000265643	999
IGF1	ENSP00000302665	MAPK3*	ENSP00000263025	905
CX3CR1	ENSP00000351059	IL2*	ENSP00000226730	907
CCL11	ENSP00000302234	IL1A	ENSP00000263339	903
COL3A1	ENSP00000304408	VWF*	ENSP00000261405	900
ITGB2*	ENSP00000303242	ITGA2B	ENSP00000262407	909
CLU*	ENSP00000315130	APOE	ENSP00000252486	904
KREMEN2*	ENSP00000304422	LRP6	ENSP00000261349	971
FGFR1*	ENSP00000311337	KL	ENSP00000255481	913
SHC1*	ENSP00000336919	MPL	ENSP00000236056	970
ACE	ENSP00000290866	AGTR1	ENSP00000273430	908
HSPD1	ENSP00000340019	HSPE1*	ENSP00000233893	998
ENSP00000301330*	ENSP00000301330	GCLM	ENSP00000263891	900
LPA	ENSP00000321334	CANX*	ENSP00000247461	905
MADCAM1*	ENSP00000346203	TNF	ENSP00000229681	924

Symbol	StringID	Symbol	StringID	CS
MMP14*	ENSP00000346201	TNF	ENSP00000229681	908
PTGS1	ENSP00000354612	PTGDS*	ENSP00000224167	956
TLR4	ENSP00000346893	IFNG*	ENSP00000229135	925
ANXA2*	ENSP00000346032	TNF	ENSP00000229681	905
GRP58*	ENSP00000300289	STAT3	ENSP00000264657	903
BDKRB2*	ENSP00000307713	AGT	ENSP00000258224	911
ENPP1	ENSP00000350964	IBSP*	ENSP00000226284	900
ENPP1	ENSP00000350964	CD38*	ENSP00000226279	971
CSF1	ENSP00000327513	PLAU*	ENSP00000242464	913
CXCL11	ENSP00000306884	ITM2B*	ENSP00000258659	900
MAPK9*	ENSP00000345524	TNF	ENSP00000229681	953
VEGFA	ENSP00000317598	DLL4*	ENSP00000249749	912
HMGB1*	ENSP00000345347	TNF	ENSP00000229681	900
IL8*	ENSP00000306512	IL6	ENSP00000258743	944
CX3CR1	ENSP00000351059	CCL2*	ENSP00000225831	904
LIPC	ENSP00000299022	MGLL*	ENSP00000265052	900
CYP7A1*	ENSP00000301645	PPARA	ENSP00000262735	902
FOS*	ENSP00000306245	IL6	ENSP00000258743	983
ANPEP*	ENSP00000300060	GCLM	ENSP00000263891	900
ACE	ENSP00000290866	ENSP00000272190*	ENSP00000272190	910
SNCG*	ENSP00000344658	TNF	ENSP00000229681	900
GCGR*	ENSP00000345040	GNB3	ENSP00000229264	900
CD14*	ENSP00000304236	TLR2	ENSP00000260010	935
CXCL10*	ENSP00000305651	IL6	ENSP00000258743	927
FOS*	ENSP00000306245	AGT	ENSP00000258224	920
CSF1	ENSP00000327513	FLT3*	ENSP00000241453	919
VCAM1	ENSP00000294728	ITGAD*	ENSP00000268297	957
MBTPS1*	ENSP00000344223	TNF	ENSP00000229681	919
EDNRA	ENSP00000315011	INS	ENSP00000250971	900
IL17*	ENSP00000344192	TNF	ENSP00000229681	919
ERBB4*	ENSP00000342235	HBEGF	ENSP00000230990	919
IL15	ENSP00000296545	TNFRSF7*	ENSP00000266557	905
STAT6*	ENSP00000300134	IL1A	ENSP00000263339	905

Symbol	StringID	Symbol	StringID	CS
CEBPB*	ENSP00000305422	IL6	ENSP00000258743	922
STAT5A*	ENSP00000341208	NR3C1	ENSP00000231509	964
PPARBP*	ENSP00000300651	PPARA	ENSP00000262735	987
ABL1*	ENSP00000298467	STAT3	ENSP00000264657	905
IGF1	ENSP00000302665	GDF8*	ENSP00000260950	921
CYP11B2	ENSP00000325822	AKR1D1*	ENSP00000242375	900
MMP3	ENSP00000299855	IL1A	ENSP00000263339	900
IGF2	ENSP00000348986	VTN	ENSP00000226218	983
TNFRSF25*	ENSP00000314549	INS	ENSP00000250971	900
JUN*	ENSP00000314522	INS	ENSP00000250971	900
TSHR*	ENSP00000298171	STAT3	ENSP00000264657	973
IL13*	ENSP00000304915	IL6	ENSP00000258743	919
NOS3	ENSP00000297494	ENSP00000265171*	ENSP00000265171	901
MMP3	ENSP00000299855	MAPK3*	ENSP00000263025	900
MAPK8*	ENSP00000353483	SERPINE1	ENSP00000223095	900
SOST*	ENSP00000301691	LRP6	ENSP00000261349	917
NOS2A	ENSP00000327251	KALRN	ENSP00000240874	900
TLR4	ENSP00000346893	SPI1*	ENSP00000227163	910
VEGFA	ENSP00000317598	GFER*	ENSP00000248114	900
MMP3	ENSP00000299855	TIMP2*	ENSP00000262768	908
NR0B1*	ENSP00000302390	CYP19A1	ENSP00000260433	933
CDK5*	ENSP00000297518	STAT3	ENSP00000264657	902
PTDSS2*	ENSP00000308258	PNMT	ENSP00000255389	900
CD14*	ENSP00000304236	IL6	ENSP00000258743	930
VCAM1	ENSP00000294728	ITGB7*	ENSP00000267082	946
CLEC7A*	ENSP00000302569	TLR2	ENSP00000260010	900
IFNB1*	ENSP00000302523	TLR2	ENSP00000260010	917
CSF2	ENSP00000296871	ICAM1	ENSP00000264832	900
IL3*	ENSP00000296870	ICAM1	ENSP00000264832	900
PTGS1	ENSP00000354612	CYP4F2*	ENSP00000221700	918
PHOX2A*	ENSP00000298231	DBH	ENSP00000263611	912
ABCA1	ENSP00000297693	LCAT	ENSP00000264005	906
PIAS3*	ENSP00000303630	IL6	ENSP00000258743	910

Symbol	StringID	Symbol	StringID	CS
CSF1	ENSP00000327513	TNFSF11*	ENSP00000239849	914
WRN	ENSP00000298139	NALP2*	ENSP00000263437	940
GATA2	ENSP00000345681	SPI1*	ENSP00000227163	968
NOS3	ENSP00000297494	KDR*	ENSP00000263923	902
NOS2A	ENSP00000327251	TNFSF11*	ENSP00000239849	916
JUNB*	ENSP00000303315	IL6	ENSP00000258743	920
GH1	ENSP00000312673	INS	ENSP00000250971	903
LEP	ENSP00000312652	INS	ENSP00000250971	900
IL12A*	ENSP00000303231	IL6	ENSP00000258743	922
BCL2*	ENSP00000353498	TGFB1	ENSP00000221930	910
CSF2	ENSP00000296871	CD80*	ENSP00000264246	920
IL15	ENSP00000296545	IL21*	ENSP00000264497	933
BAZ1B*	ENSP00000342434	VDR	ENSP00000229022	940
ENSP00000352471*	ENSP00000352471	PON1	ENSP00000222381	968
TRADD*	ENSP00000341268	TNF	ENSP00000229681	990
PTK2*	ENSP00000341189	TNF	ENSP00000229681	905
IL15	ENSP00000296545	CD80*	ENSP00000264246	900
TPX2*	ENSP00000341145	TNF	ENSP00000229681	900
CSF1	ENSP00000327513	DUSP1*	ENSP00000239223	900
CD36	ENSP00000353555	RETN*	ENSP00000221515	903
NPPC	ENSP00000295440	NPR3	ENSP00000265074	975
IGF1	ENSP00000302665	IL6	ENSP00000258743	922
UCP2*	ENSP00000312029	INS	ENSP00000250971	900
BCL2L1*	ENSP00000302564	IL6	ENSP00000258743	903
IFNB1*	ENSP00000302523	IL6	ENSP00000258743	916
GHRL*	ENSP00000335074	GCG	ENSP00000233604	900
NOS3	ENSP00000297494	MAPK3*	ENSP00000263025	902
IL15	ENSP00000296545	IL7*	ENSP00000263851	939
TRPV1*	ENSP00000311692	INS	ENSP00000250971	900
ABCA1	ENSP00000297693	PPARA	ENSP00000262735	904
LPL	ENSP00000309757	APOC4*	ENSP00000252489	998
LPL	ENSP00000309757	APOE	ENSP00000252486	991
LPL	ENSP00000309757	LDLR	ENSP00000252444	906

Symbol	StringID	Symbol	StringID	CS
TH*	ENSP00000325831	EGR1	ENSP00000239938	900
CSF2	ENSP00000296871	IL1B*	ENSP00000263341	909
CSF2	ENSP00000296871	IL1A	ENSP00000263339	924
IL3*	ENSP00000296870	IL1A	ENSP00000263339	900
TLR3*	ENSP00000296795	IL1A	ENSP00000263339	914
VEGFA	ENSP00000317598	BMP2*	ENSP00000246044	915
GNG2*	ENSP00000334448	GCG	ENSP00000233604	900
GATA2	ENSP00000345681	HDAC5*	ENSP00000225983	980
TLR5*	ENSP00000340089	TNF	ENSP00000229681	926
ZBTB16*	ENSP00000338157	HBEGF	ENSP00000230990	933
TGFB2*	ENSP00000295754	TGFB2	ENSP00000264103	998
ENPP1	ENSP00000350964	PBEF1*	ENSP00000222553	900
CSF2	ENSP00000296871	MAPK3*	ENSP00000263025	980
IRS1	ENSP00000304895	KRAS*	ENSP00000256078	936
CXCL12*	ENSP00000339913	TNF	ENSP00000229681	931
PF4	ENSP00000296029	SELP	ENSP00000263686	903
PPBP*	ENSP00000296028	SELP	ENSP00000263686	900
VCAM1	ENSP00000294728	ITGA9*	ENSP00000264741	936
CSF2	ENSP00000296871	CSF2RB*	ENSP00000262825	999
MMP13*	ENSP00000339672	TNF	ENSP00000229681	910
GRB7*	ENSP00000310771	INS	ENSP00000250971	900
EDNRA	ENSP00000315011	EDN2	ENSP00000247589	983
LMNA*	ENSP00000310687	INS	ENSP00000250971	900
B7H2*	ENSP00000339477	TNF	ENSP00000229681	922
DCP1A	ENSP00000294241	XRN1*	ENSP00000264951	983
CXCL1*	ENSP00000296031	IL1A	ENSP00000263339	903
CXCL5*	ENSP00000296027	IL1A	ENSP00000263339	900
VEGFA	ENSP00000317598	BMP4*	ENSP00000245451	916
CYBB*	ENSP00000297870	CYBA	ENSP00000261623	999
JAK1*	ENSP00000294423	STAT3	ENSP00000264657	999
F3	ENSP00000334145	TFPI	ENSP00000233156	998
IKBKB*	ENSP00000339151	TNF	ENSP00000229681	985
NOS3	ENSP00000297494	ARG2*	ENSP00000261783	963

Symbol	StringID	Symbol	StringID	CS
TRH	ENSP00000303452	TSHB*	ENSP00000256592	917
LEP	ENSP00000312652	GPR24*	ENSP00000249016	900
FOSL1*	ENSP00000310170	INS	ENSP00000250971	900
TNFSF12*	ENSP00000293826	ICAM1	ENSP00000264832	900
INSR	ENSP00000303830	FABP4*	ENSP00000256104	967
HRAS*	ENSP00000309845	INS	ENSP00000250971	900
PDGFD*	ENSP00000302193	PDGFRA	ENSP00000257290	927
LPL	ENSP00000309757	INS	ENSP00000250971	900
FABP1*	ENSP00000295834	PPARA	ENSP00000262735	954
ITGA2	ENSP00000296585	ITGB3	ENSP00000262017	905
IL19*	ENSP00000338300	TNF	ENSP00000229681	910
REL*	ENSP00000295025	IL1A	ENSP00000263339	909
DCP1A	ENSP00000294241	DDX6*	ENSP00000264018	940
MAPKAPK2*	ENSP00000294981	IL1A	ENSP00000263339	937
STOM*	ENSP00000286713	SLC2A1	ENSP00000270929	969
MPO	ENSP00000344419	CSF3*	ENSP00000225474	911
AKT2*	ENSP00000309428	INS	ENSP00000250971	900
F2R	ENSP00000321326	PLG*	ENSP00000241669	967
VCAM1	ENSP00000294728	IL1B*	ENSP00000263341	914
VCAM1	ENSP00000294728	IL1A	ENSP00000263339	909
CCL16*	ENSP00000293275	ENSP00000264613*	ENSP00000264613	900
HSPCA*	ENSP00000335153	NR3C1	ENSP00000231509	999
MMP3	ENSP00000299855	IL6	ENSP00000258743	906
RHOT2*	ENSP00000321971	KALRN	ENSP00000240874	900
CSF2	ENSP00000296871	SYT1*	ENSP00000261205	900
GSTM1	ENSP00000311469	GSTT1	ENSP00000248935	965
CHIT1*	ENSP00000355262	RENB	ENSP00000218151	900
ZBTB16*	ENSP00000338157	VDR	ENSP00000229022	964
VPS28*	ENSP00000292510	F11	ENSP00000264691	901
ARFRP1*	ENSP00000326884	APOA1	ENSP00000236850	900
NFKB2*	ENSP00000337001	TNF	ENSP00000229681	973
RDX*	ENSP00000342830	ICAM2	ENSP00000225760	947
TRAF5*	ENSP00000336825	TNF	ENSP00000229681	908

Symbol	StringID	Symbol	StringID	CS
IL6R*	ENSP00000292208	STAT3	ENSP00000264657	961
CRK*	ENSP00000300574	PDGFRA	ENSP00000257290	949
DCP1A	ENSP00000294241	RENT1*	ENSP00000262803	961
HSPD1	ENSP00000340019	HSPA8*	ENSP00000227378	976
FOXO1A*	ENSP00000280496	IGFBP1	ENSP00000275525	907
PROS1	ENSP00000330021	PROC*	ENSP00000234071	997
CSF2	ENSP00000296871	TLR2	ENSP00000260010	918
PROS1	ENSP00000330021	GGCX*	ENSP00000233838	965
ENPP1	ENSP00000350964	QPRT*	ENSP00000219771	900
IL15	ENSP00000296545	TLR2	ENSP00000260010	926
SMAD3*	ENSP00000332973	NR3C1	ENSP00000231509	946
ENG*	ENSP00000291836	TGFB2	ENSP00000264103	939
F8*	ENSP00000353393	F9	ENSP00000218099	999
GP9*	ENSP00000303942	F12	ENSP00000253496	900
CSF2	ENSP00000296871	MYC*	ENSP00000259523	900
FMOD*	ENSP00000347041	TGFB1	ENSP00000221930	909
MMP14*	ENSP00000346201	HGF	ENSP00000222390	904
VCAM1	ENSP00000294728	SYT1*	ENSP00000261205	905
ENSP00000278568*	ENSP00000278568	HP	ENSP00000276297	902
CXCR3*	ENSP00000335095	TNF	ENSP00000229681	910
TNFRSF11B	ENSP00000297350	IL6	ENSP00000258743	912
CYBASC3*	ENSP00000294072	CYBA	ENSP00000261623	900
CSF2	ENSP00000296871	IL10*	ENSP00000259152	935
CYBB*	ENSP00000297870	AGT	ENSP00000258224	912
COL2A1*	ENSP00000346511	TGFB1	ENSP00000221930	943
LTBP1*	ENSP00000346467	TGFB1	ENSP00000221930	998
RXRA*	ENSP00000335676	VDR	ENSP00000229022	979
USF1	ENSP00000289790	GPAM*	ENSP00000265276	900
FOS*	ENSP00000306245	INS	ENSP00000250971	900
IL15	ENSP00000296545	IL10*	ENSP00000259152	905
F2R	ENSP00000321326	GNA13*	ENSP00000239138	989
NOS3	ENSP00000297494	AGT	ENSP00000258224	919
CSF2	ENSP00000296871	IL6	ENSP00000258743	932

Symbol	StringID	Symbol	StringID	CS
IL3*	ENSP00000296870	IL6	ENSP00000258743	913
ITGA2	ENSP00000296585	CHAD*	ENSP00000258969	934
IL10RB*	ENSP00000290200	STAT3	ENSP00000264657	915
TLR3*	ENSP00000296795	IL6	ENSP00000258743	927
SRC*	ENSP00000353950	MMP9	ENSP00000216953	900
HSD11B2 *	ENSP00000316786	AKR1D1*	ENSP00000242375	900
FBN1	ENSP00000325527	MFAP2*	ENSP00000235772	967
CYP11B2	ENSP00000325822	HSD3B1*	ENSP00000235547	929
VCAM1	ENSP00000294728	NOX5*	ENSP00000260364	900
ANXA5*	ENSP00000296511	IL6	ENSP00000258743	900
WNT1*	ENSP00000293549	LRP6	ENSP00000261349	969
BCL2*	ENSP00000353498	MMP9	ENSP00000216953	902
MAPK8*	ENSP00000353483	MMP9	ENSP00000216953	900
VEGFA	ENSP00000317598	GTF3A*	ENSP00000241462	900
GNG2*	ENSP00000334448	GNB3	ENSP00000229264	994
ACE	ENSP00000290866	DCPS*	ENSP00000263579	911
VEGFA	ENSP00000317598	CXCR4*	ENSP00000241393	906
LRP8	ENSP00000303634	APOE	ENSP00000252486	991
CEBPB*	ENSP00000305422	INS	ENSP00000250971	900
MAPK11*	ENSP00000333685	TNF	ENSP00000229681	970
FGFR2	ENSP00000350166	FGF9*	ENSP00000218862	999
PRKCB1*	ENSP00000305355	INS	ENSP00000250971	900
SLC2A4	ENSP00000320935	RHOQ*	ENSP00000238738	900
TLR4	ENSP00000346893	RIPK2*	ENSP00000220751	965
NOS2A	ENSP00000327251	IL1R1*	ENSP00000233946	902
PTEN*	ENSP00000304973	INS	ENSP00000250971	900
GPX3	ENSP00000288332	ALOX5*	ENSP00000265455	900
APOA2*	ENSP00000289906	LCAT	ENSP00000264005	920
IRS1	ENSP00000304895	INS	ENSP00000250971	990
IRAK1*	ENSP00000333139	TNF	ENSP00000229681	930
CXCL16	ENSP00000293778	ADAM10*	ENSP00000260408	915
P4HB*	ENSP00000327801	APOB	ENSP00000233242	922
FASN*	ENSP00000304592	INS	ENSP00000250971	900

Symbol	StringID	Symbol	StringID	CS
TGFA*	ENSP00000295400	IL6	ENSP00000258743	926
CDK5R1*	ENSP00000318486	EGR1	ENSP00000239938	937
VLDLR	ENSP00000327160	SNX17*	ENSP00000233575	906
MAF*	ENSP00000327048	GCG	ENSP00000233604	902
IL17*	ENSP00000344192	TGFB1	ENSP00000221930	967
VCAM1	ENSP00000294728	IL10*	ENSP00000259152	913
TGM7*	ENSP00000290687	PPARA	ENSP00000262735	900
TRAF3*	ENSP00000332468	TNF	ENSP00000229681	920
C4B*	ENSP00000299406	APCS	ENSP00000255040	900
REL*	ENSP00000295025	IL6	ENSP00000258743	914
TNFRSF4*	ENSP00000332309	TNF	ENSP00000229681	931
RNF36*	ENSP00000332284	TNF	ENSP00000229681	900
VLDLR	ENSP00000327160	APOB	ENSP00000233242	900
NAB1*	ENSP00000318000	EGR1	ENSP00000239938	975
RHOJ*	ENSP00000316729	KALRN	ENSP00000240874	909
ABCC8*	ENSP00000303960	INS	ENSP00000250971	902
CBS	ENSP00000344460	SARS2*	ENSP00000221431	907
CD86*	ENSP00000332049	TNF	ENSP00000229681	926
LPA	ENSP00000321334	CTGF*	ENSP00000237313	900
INSR	ENSP00000303830	INS	ENSP00000250971	999
PPARG	ENSP00000287820	PPARGC1A*	ENSP00000264867	973
GNG7*	ENSP00000326294	GCG	ENSP00000233604	900
FGG *	ENSP00000336829	VTN	ENSP00000226218	901
SELE	ENSP00000331736	TNF	ENSP00000229681	916
DUSP2*	ENSP00000288943	SELP	ENSP00000263686	900
JAK1*	ENSP00000294423	IL6	ENSP00000258743	919
IL15	ENSP00000296545	IL15RA*	ENSP00000256887	998
ENPP1	ENSP00000350964	PYGB*	ENSP00000216962	900
ITGAM*	ENSP00000287497	ICAM1	ENSP00000264832	997
CSF2	ENSP00000296871	IL5RA*	ENSP00000256452	931
F2	ENSP00000308541	F10	ENSP00000246496	981
HSPA4*	ENSP00000302961	INS	ENSP00000250971	900
WRN	ENSP00000298139	PCNA*	ENSP00000254983	969

Symbol	StringID	Symbol	StringID	CS
SELE	ENSP00000331736	IFNG*	ENSP00000229135	907
HSD11B2 *	ENSP00000316786	EGR1	ENSP00000239938	905
BGN*	ENSP00000342318	TGFB1	ENSP00000221930	994
CYP11B2	ENSP00000325822	SRD5A2*	ENSP00000233139	900
PAPPA*	ENSP00000330658	TNF	ENSP00000229681	900
ENPP1	ENSP00000350964	PYGL*	ENSP00000216392	900
WRN	ENSP00000298139	RPA70*	ENSP00000254719	961
ITGA5*	ENSP00000293379	IL6	ENSP00000258743	903
WT1*	ENSP00000331327	VDR	ENSP00000229022	904
PTK2*	ENSP00000341189	HGF	ENSP00000222390	913
SOC3*	ENSP00000330341	TNF	ENSP00000229681	934
CASP9*	ENSP00000330237	TNF	ENSP00000229681	913
MMP14*	ENSP00000346201	MMP2	ENSP00000219070	983
ENSP00000302150*	ENSP00000302150	INS	ENSP00000250971	908
DUSP2*	ENSP00000288943	ITGA2B	ENSP00000262407	900
ITGAM*	ENSP00000287497	SELP	ENSP00000263686	900
CSF1	ENSP00000327513	IL4*	ENSP00000231449	913
SMAD4*	ENSP00000341551	TGFB1	ENSP00000221930	994
PPARG	ENSP00000287820	PAX8*	ENSP00000263334	905
SELE	ENSP00000331736	SELPLG*	ENSP00000228463	982
TBXAS1	ENSP00000338087	PTGDS*	ENSP00000224167	900
NOS2A	ENSP00000327251	RARS*	ENSP00000231572	900
NRIP1*	ENSP00000327213	NR3C1	ENSP00000231509	986
CDC42*	ENSP00000314458	KALRN	ENSP00000240874	928
NOS2A	ENSP00000327251	IL4*	ENSP00000231449	912
NCF1*	ENSP00000289473	CYBA	ENSP00000261623	999
CCL5*	ENSP00000293272	AGT	ENSP00000258224	900
LEP	ENSP00000312652	NPY*	ENSP00000242152	916
CYP4A22*	ENSP00000294337	CYP2J2	ENSP00000257149	924
IRF7*	ENSP00000329411	TNF	ENSP00000229681	921
IL22*	ENSP00000329384	TNF	ENSP00000229681	912
NOS3	ENSP00000297494	GCH1*	ENSP00000254299	907
SP1*	ENSP00000329357	TNF	ENSP00000229681	920

Symbol	StringID	Symbol	StringID	CS
SNN*	ENSP00000329287	TNF	ENSP00000229681	900
ASAH1*	ENSP00000286733	SELP	ENSP00000263686	900
IL6R*	ENSP00000292208	IL6	ENSP00000258743	999
MMP14*	ENSP00000346201	TIMP1	ENSP00000218388	909
TDGF3*	ENSP00000329126	TNF	ENSP00000229681	900
ALOX15*	ENSP00000293761	CYP2J2	ENSP00000257149	900
FCN2*	ENSP00000291744	IL6	ENSP00000258743	900
TFE3*	ENSP00000338360	SERPINE1	ENSP00000223095	900
FGFR2	ENSP00000350166	FGF22*	ENSP00000215530	996
JUN*	ENSP00000314522	EGR1	ENSP00000239938	973
GH1	ENSP00000312673	GHSR*	ENSP00000241256	906
LEP	ENSP00000312652	GHSR*	ENSP00000241256	907
MTMR2*	ENSP00000345752	RENB	ENSP00000218151	900
TLR4	ENSP00000346893	LBP*	ENSP00000217407	920
VEGFA	ENSP00000317598	CTGF*	ENSP00000237313	969
ENG*	ENSP00000291836	AGT	ENSP00000258224	900
CA2*	ENSP00000285379	SLC9A1	ENSP00000263980	987
EGFR*	ENSP00000275493	AGTR1	ENSP00000273430	962
IL3RA*	ENSP00000327890	TNF	ENSP00000229681	900
NFATC1*	ENSP00000327850	TNF	ENSP00000229681	957
LPL	ENSP00000309757	LRP1*	ENSP00000243077	996
NOS3	ENSP00000297494	ASS*	ENSP00000253004	900
FZD1*	ENSP00000287934	LRP6	ENSP00000261349	996
APOL1*	ENSP00000317674	APOA1	ENSP00000236850	958
CSF1	ENSP00000327513	TNF	ENSP00000229681	977
HP	ENSP00000276297	RHOB*	ENSP00000272233	900
F2R	ENSP00000321326	PROC*	ENSP00000234071	903
TLR4	ENSP00000346893	NFKB1A*	ENSP00000216797	918
GSTM1	ENSP00000311469	GSTM2*	ENSP00000241337	963
NOS2A	ENSP00000327251	TNF	ENSP00000229681	922
ABCA1	ENSP00000297693	APOE	ENSP00000252486	910
TAT*	ENSP00000348234	MIF	ENSP00000215754	900
CD8A*	ENSP00000283635	ICAM1	ENSP00000264832	900

Symbol	StringID	Symbol	StringID	CS
ACE	ENSP00000290866	AGT	ENSP00000258224	933
INSR	ENSP00000303830	IRS4*	ENSP00000247066	959
APP*	ENSP00000284981	IL1A	ENSP00000263339	904
CSF1	ENSP00000327513	IFNG*	ENSP00000229135	926
IL3*	ENSP00000296870	EPO	ENSP00000252723	905
NOS2A	ENSP00000327251	IFNG*	ENSP00000229135	916
EHMT1*	ENSP00000298728	INS	ENSP00000250971	900
LPA	ENSP00000321334	APOB	ENSP00000233242	990
GNG10*	ENSP00000320650	GCG	ENSP00000233604	900
CBS	ENSP00000344460	AHCY*	ENSP00000217426	937
CA2*	ENSP00000285379	SLC4A1	ENSP00000262418	975
CALR*	ENSP00000320866	APOB	ENSP00000233242	992
TH*	ENSP00000325831	TNF	ENSP00000229681	900
GNG7*	ENSP00000326294	GNB3	ENSP00000229264	993
LRPAP1*	ENSP00000296325	LDLR	ENSP00000252444	912
NCF1*	ENSP00000289473	AGT	ENSP00000258224	910
ALB*	ENSP00000295897	APOE	ENSP00000252486	948
CD8A*	ENSP00000283635	IL1A	ENSP00000263339	900
SETBP1*	ENSP00000282030	ICAM1	ENSP00000264832	900
NOS3	ENSP00000297494	INS	ENSP00000250971	900
WRN	ENSP00000298139	PARP2*	ENSP00000250416	927
PAX6*	ENSP00000319499	GCG	ENSP00000233604	903
CD28*	ENSP00000324890	TNF	ENSP00000229681	930
HSD11B2 *	ENSP00000316786	HSD3B1*	ENSP00000235547	943
SHH*	ENSP00000297261	INS	ENSP00000250971	900
CHIA*	ENSP00000341828	RENB	ENSP00000218151	900
DKK2*	ENSP00000285311	LRP6	ENSP00000261349	999
IL2RA*	ENSP00000281359	ICAM1	ENSP00000264832	905
MPO	ENSP00000344419	CTSG*	ENSP00000216336	900
CXCL12*	ENSP00000339913	MMP2	ENSP00000219070	969
IL2RA*	ENSP00000281359	STAT3	ENSP00000264657	940
GP1BA	ENSP00000329380	COL1A1*	ENSP00000225964	900
AGTR1	ENSP00000273430	ENSP00000272190*	ENSP00000272190	903

Symbol	StringID	Symbol	StringID	CS
CSF1	ENSP00000327513	SPI1*	ENSP00000227163	911
FER*	ENSP00000281092	STAT3	ENSP00000264657	990
MYD88*	ENSP00000323890	TNF	ENSP00000229681	933
IRS1	ENSP00000304895	PI3*	ENSP00000243924	900
WNT3A*	ENSP00000284523	LRP6	ENSP00000261349	935
GNE*	ENSP00000340770	RENBP	ENSP00000218151	980
RHOD*	ENSP00000308576	KALRN	ENSP00000240874	900
NCOA1*	ENSP00000320940	NR3C1	ENSP00000231509	996
SMAD3*	ENSP00000332973	SERPINE1	ENSP00000223095	903
CALR*	ENSP00000320866	NR3C1	ENSP00000231509	946
GH1	ENSP00000312673	GHRH*	ENSP00000237527	919
NCF2	ENSP00000340837	NOX1*	ENSP00000217884	945
CCNA2*	ENSP00000274026	ENSP00000271002*	ENSP00000271002	963
ALB*	ENSP00000295897	INS	ENSP00000250971	900
CSF1	ENSP00000327513	IL2*	ENSP00000226730	913
IL18*	ENSP00000280357	ICAM1	ENSP00000264832	900
HSF1*	ENSP00000332698	SERPINE1	ENSP00000223095	900
PTPRN*	ENSP00000295718	INS	ENSP00000250971	900
IGFBP7*	ENSP00000295666	INS	ENSP00000250971	967
MMP1*	ENSP00000322788	TNF	ENSP00000229681	906
INSR	ENSP00000303830	PLCG1*	ENSP00000244007	937
INSR	ENSP00000303830	PI3*	ENSP00000243924	900
IL2RA*	ENSP00000281359	IL1A	ENSP00000263339	907
NEUROD1*	ENSP00000295108	INS	ENSP00000250971	904
LY96*	ENSP00000284818	TLR2	ENSP00000260010	997
CTF1*	ENSP00000279804	STAT3	ENSP00000264657	904
NPPA	ENSP00000309540	DUSP1*	ENSP00000239223	906
LPL	ENSP00000309757	LIPF*	ENSP00000238983	966
TAGLN	ENSP00000278968	SRF*	ENSP00000265354	920
ALB*	ENSP00000295897	SHBG	ENSP00000250080	900
LMX1A*	ENSP00000294816	INS	ENSP00000250971	900
ITGAL*	ENSP00000321989	TNF	ENSP00000229681	918
CD40	ENSP00000279061	ICAM1	ENSP00000264832	900

Symbol	StringID	Symbol	StringID	CS
SMAD3*	ENSP00000332973	TGFB1	ENSP00000221930	999
IGFBP1	ENSP00000275525	IGF1R*	ENSP00000268035	903
CSF1	ENSP00000327513	CSF3*	ENSP00000225474	933
IL18*	ENSP00000280357	IL1A	ENSP00000263339	928
HP	ENSP00000276297	RHOF*	ENSP00000267205	900
IGF1	ENSP00000302665	PI3*	ENSP00000243924	900
CXCL12*	ENSP00000339913	MMP9	ENSP00000216953	912
THBD	ENSP00000315029	PROC*	ENSP00000234071	999
APP*	ENSP00000284981	IL6	ENSP00000258743	921
ENSP00000306100*	ENSP00000306100	KALRN	ENSP00000240874	929
SLC2A4	ENSP00000320935	TNF	ENSP00000229681	910
NCL*	ENSP00000318195	NR3C1	ENSP00000231509	946
ADIPOQ	ENSP00000320709	TNF	ENSP00000229681	908
AGTR1	ENSP00000273430	ARRB2*	ENSP00000269260	981
CCL16*	ENSP00000293275	INS	ENSP00000250971	900
PRKCA*	ENSP00000284384	IL6	ENSP00000258743	903
TRAF1*	ENSP00000320093	TNF	ENSP00000229681	928
GNG10*	ENSP00000320650	GNB3	ENSP00000229264	967
VEGFA	ENSP00000317598	IL4*	ENSP00000231449	906
NCOA1*	ENSP00000320940	VDR	ENSP00000229022	968
CD40	ENSP00000279061	IL1A	ENSP00000263339	908
ADM	ENSP00000278175	CALCRL*	ENSP00000264152	970
FOS*	ENSP00000306245	EGR1	ENSP00000239938	920
SP1*	ENSP00000329357	SERPINE1	ENSP00000223095	900
THBD	ENSP00000315029	TFPI	ENSP00000233156	900
NUDT6*	ENSP00000306070	EGR1	ENSP00000239938	900
IL8RB	ENSP00000319635	TNF	ENSP00000229681	909
CD8A*	ENSP00000283635	IL6	ENSP00000258743	900
IGF1	ENSP00000302665	PLAU*	ENSP00000242464	914
VEGFA	ENSP00000317598	SPARC*	ENSP00000231061	932
ICOS*	ENSP00000319476	TNF	ENSP00000229681	931
CRP	ENSP00000319435	TNF	ENSP00000229681	914
LPA	ENSP00000321334	PXN*	ENSP00000228307	900

Symbol	StringID	Symbol	StringID	CS
NPR1*	ENSP00000305386	NPPB	ENSP00000240174	920
THBS2*	ENSP00000334802	MMP2	ENSP00000219070	968
GLUD1*	ENSP00000277865	GCLM	ENSP00000263891	900
CD44*	ENSP00000278385	IL1A	ENSP00000263339	900
CAV1*	ENSP00000339191	HMOX1	ENSP00000216117	906
ENSP00000304283*	ENSP00000304283	KALRN	ENSP00000240874	900
CD34*	ENSP00000310036	SELL	ENSP00000236147	960
SLC2A1	ENSP00000270929	AKT1*	ENSP00000270202	904
APOA2*	ENSP00000289906	APOE	ENSP00000252486	992
FN1*	ENSP00000323534	VTN	ENSP00000226218	905
LEPR	ENSP00000330393	RETN*	ENSP00000221515	900
LRP8	ENSP00000303634	MAPK8IP1*	ENSP00000241014	923
LYN*	ENSP00000276497	STAT3	ENSP00000264657	903
PTEN*	ENSP00000304973	EGR1	ENSP00000239938	911
FGF1*	ENSP00000338548	HMOX1	ENSP00000216117	912
RHOH*	ENSP00000303689	KALRN	ENSP00000240874	906
IL15	ENSP00000296545	HCST*	ENSP00000246551	900
LEP	ENSP00000312652	IGFBP2*	ENSP00000233809	907
SP1*	ENSP00000329357	TGFB1	ENSP00000221930	905
MSN*	ENSP00000275995	ICAM1	ENSP00000264832	957
HIF1A*	ENSP00000338018	HMOX1	ENSP00000216117	900
LEP	ENSP00000312652	GCG	ENSP00000233604	900
AGRP*	ENSP00000290953	INS	ENSP00000250971	900
BCAS3*	ENSP00000353977	ESR1	ENSP00000206249	925
SRC*	ENSP00000353950	ESR1	ENSP00000206249	969
PTH*	ENSP00000282091	IL6	ENSP00000258743	927
NRBF2*	ENSP00000277746	PPARA	ENSP00000262735	902
EPHX1*	ENSP00000272167	CYP1A1	ENSP00000268062	972
VEGFA	ENSP00000317598	DDAH2*	ENSP00000229707	918
VEGFA	ENSP00000317598	TNF	ENSP00000229681	926
ENSP00000290573*	ENSP00000290573	INS	ENSP00000250971	900
LDLRAP1*	ENSP00000288855	LDLR	ENSP00000252444	971
EGFR*	ENSP00000275493	STAT3	ENSP00000264657	972

Symbol	StringID	Symbol	StringID	CS
F2	ENSP00000308541	SERPINC1*	ENSP00000236260	998
WRN	ENSP00000298139	WRNIP1*	ENSP00000244490	979
F3	ENSP00000334145	F9	ENSP00000218099	988
MSN*	ENSP00000275995	SLC9A1	ENSP00000263980	976
CRH*	ENSP00000276571	IL1A	ENSP00000263339	900
JUN*	ENSP00000314522	NR3C1	ENSP00000231509	992
TIRAP*	ENSP00000279992	TLR2	ENSP00000260010	988
IL2RA*	ENSP00000281359	IL6	ENSP00000258743	926
JUNB*	ENSP00000303315	EGR1	ENSP00000239938	920
IL15	ENSP00000296545	IRF1*	ENSP00000245414	927
CRAMP1L*	ENSP00000293925	EDN2	ENSP00000247589	900
TRAF6*	ENSP00000316840	TNF	ENSP00000229681	928
VEGFA	ENSP00000317598	MGP	ENSP00000228938	900
ITGAL*	ENSP00000321989	ICAM2	ENSP00000225760	980
HMGCR*	ENSP00000287936	LDLR	ENSP00000252444	901
DAF*	ENSP00000316333	TNF	ENSP00000229681	900
CIITA*	ENSP00000316328	TNF	ENSP00000229681	912
JUN*	ENSP00000314522	HBEGF	ENSP00000230990	915
THBS2*	ENSP00000334802	MMP9	ENSP00000216953	908
NOS2A	ENSP00000327251	TGFB1	ENSP00000221930	907
SERPINB2	ENSP00000299502	PLAU*	ENSP00000242464	999
MAP2K1*	ENSP00000302486	EGR1	ENSP00000239938	902
CD40	ENSP00000279061	TLR2	ENSP00000260010	915
IL18*	ENSP00000280357	IL6	ENSP00000258743	934
ACE	ENSP00000290866	LSM8*	ENSP00000249299	948
VEGFA	ENSP00000317598	KITLG*	ENSP00000228280	915
MMP3	ENSP00000299855	PLG*	ENSP00000241669	923
SERPINA5	ENSP00000298842	PLAU*	ENSP00000242464	981
NFKBIE*	ENSP00000275015	IL1A	ENSP00000263339	940
CTF1*	ENSP00000279804	IL6	ENSP00000258743	912
SERPINB2	ENSP00000299502	PLG*	ENSP00000241669	989
AGTR1	ENSP00000273430	STAT3	ENSP00000264657	900
THBD	ENSP00000315029	TNF	ENSP00000229681	900

Symbol	StringID	Symbol	StringID	CS
GNG5*	ENSP00000309679	GCG	ENSP00000233604	900
IL8RB	ENSP00000319635	CXCL6*	ENSP00000226317	998
VCAM1	ENSP00000294728	IRF1*	ENSP00000245414	905
REFX4*	ENSP00000350552	ESR1	ENSP00000206249	929
IL9*	ENSP00000274520	IL1A	ENSP00000263339	900
A2M*	ENSP00000323929	SERPINE1	ENSP00000223095	900
LPL	ENSP00000309757	APOB	ENSP00000233242	990
TNFRSF25*	ENSP00000314549	TNF	ENSP00000229681	915
JUN*	ENSP00000314522	TNF	ENSP00000229681	983
PPARG	ENSP00000287820	INS	ENSP00000250971	900
F2	ENSP00000308541	PROC*	ENSP00000234071	994
CD40	ENSP00000279061	IL6	ENSP00000258743	915
GH1	ENSP00000312673	GHR*	ENSP00000230882	999
SST*	ENSP00000287641	INS	ENSP00000250971	900
SP1*	ENSP00000329357	MMP2	ENSP00000219070	900
F2	ENSP00000308541	GGCX*	ENSP00000233838	967
FBXO32*	ENSP00000287396	INS	ENSP00000250971	900
RELA*	ENSP00000311508	NR3C1	ENSP00000231509	982
TRH	ENSP00000303452	GHRH*	ENSP00000237527	920
CD40	ENSP00000279061	AGT	ENSP00000258224	900
PTGDS2*	ENSP00000295256	PTGIS	ENSP00000244043	900
NAB2*	ENSP00000300131	EGR1	ENSP00000239938	975
POU2F1*	ENSP00000310972	NR3C1	ENSP00000231509	990
APP*	ENSP00000284981	APOE	ENSP00000252486	999
SP1*	ENSP00000329357	TIMP1	ENSP00000218388	906
AGTR1	ENSP00000273430	MAPK3*	ENSP00000263025	919
F13B	ENSP00000271509	F13A1	ENSP00000264870	999
MCL1*	ENSP00000271648	STAT3	ENSP00000264657	908
GP1BA	ENSP00000329380	GATA1*	ENSP00000218266	900
IGF1	ENSP00000302665	GHRH*	ENSP00000237527	938
A2M*	ENSP00000323929	TGFB1	ENSP00000221930	900
NCOR2*	ENSP00000348551	ESR1	ENSP00000206249	969
NFKBIB*	ENSP00000312988	TNF	ENSP00000229681	932

Symbol	StringID	Symbol	StringID	CS
CALM1*	ENSP00000272298	SLC9A1	ENSP00000263980	900
GP1BA	ENSP00000329380	F9	ENSP00000218099	915
LEP	ENSP00000312652	TNF	ENSP00000229681	921
CFLAR*	ENSP00000312455	TNF	ENSP00000229681	915
PLA2G1B	ENSP00000312286	MAPK14*	ENSP00000229794	900
TNFRSF11B	ENSP00000297350	TNFSF10*	ENSP00000241261	998
IGF1	ENSP00000302665	CREB1*	ENSP00000236996	909
VEGFA	ENSP00000317598	CCL2*	ENSP00000225831	902
NCOA7*	ENSP00000347652	ESR1	ENSP00000206249	969
IL22RA1*	ENSP00000270800	STAT3	ENSP00000264657	906
MMP1*	ENSP00000322788	TGFB1	ENSP00000221930	902
ADAM17*	ENSP00000309968	HBEGF	ENSP00000230990	986
HAX1*	ENSP00000271886	IL1A	ENSP00000263339	922
IL15	ENSP00000296545	CXCR4*	ENSP00000241393	906
CRH*	ENSP00000276571	IL6	ENSP00000258743	931
RELA*	ENSP00000311508	TNF	ENSP00000229681	985
IFNAR1*	ENSP00000270139	STAT3	ENSP00000264657	986
TLR9*	ENSP00000311174	TNF	ENSP00000229681	923
LIPC	ENSP00000299022	LIPF*	ENSP00000238983	916
SLC2A1	ENSP00000270929	EPAS1*	ENSP00000263734	906
IRS1	ENSP00000304895	PLEK*	ENSP00000234313	900
CASP3*	ENSP00000311032	TNF	ENSP00000229681	916
RAB4A*	ENSP00000284615	INS	ENSP00000250971	900
IL15	ENSP00000296545	KLRC4*	ENSP00000240618	923
ERBB2*	ENSP00000269571	STAT3	ENSP00000264657	944
TP53*	ENSP00000269305	ICAM1	ENSP00000264832	900
TNFRSF11B	ENSP00000297350	TNFSF11*	ENSP00000239849	998
GNB2*	ENSP00000305260	GCG	ENSP00000233604	900
EGFR*	ENSP00000275493	IL6	ENSP00000258743	904
TP53*	ENSP00000269305	STAT3	ENSP00000264657	912
TNFRSF10D*	ENSP00000310263	TNF	ENSP00000229681	900
GP1BA	ENSP00000329380	CTSG*	ENSP00000216336	941
IRS1	ENSP00000304895	ENSP00000233668*	ENSP00000233668	920

Symbol	StringID	Symbol	StringID	CS
FOSL1*	ENSP00000310170	TNF	ENSP00000229681	915
CSF2	ENSP00000296871	EGR1	ENSP00000239938	923
IL3*	ENSP00000296870	EGR1	ENSP00000239938	900
CD209*	ENSP00000315477	ICAM2	ENSP00000225760	967
PROS1	ENSP00000330021	SERPIND1	ENSP00000215727	900
ADAM17*	ENSP00000309968	TNF	ENSP00000229681	971
INSR	ENSP00000303830	PLEK*	ENSP00000234313	900
GNAQ*	ENSP00000286548	TBXA2R	ENSP00000248419	971
LPL	ENSP00000309757	TNF	ENSP00000229681	912
EGFR*	ENSP00000275493	AGT	ENSP00000258224	917
ETS1*	ENSP00000324578	MMP2	ENSP00000219070	900
ATBF1*	ENSP00000268489	F11	ENSP00000264691	900
PENT*	ENSP00000269582	DBH	ENSP00000263611	981
KRT7*	ENSP00000329243	MIF	ENSP00000215754	900
GNG12*	ENSP00000304013	GCG	ENSP00000233604	900
ENSP00000271002*	ENSP00000271002	ITGB3	ENSP00000262017	959
FHL2*	ENSP00000344266	ESR1	ENSP00000206249	950
OLR1	ENSP00000309124	TNF	ENSP00000229681	903
GNG5*	ENSP00000309679	GNB3	ENSP00000229264	993
INSR	ENSP00000303830	ENSP00000233668*	ENSP00000233668	975
BAD*	ENSP00000309103	TNF	ENSP00000229681	910
LPL	ENSP00000309757	IFNG*	ENSP00000229135	910
IGFBP1	ENSP00000275525	HNF1A*	ENSP00000257555	910
CCL19*	ENSP00000308815	TNF	ENSP00000229681	912
LRP8	ENSP00000303634	SNX17*	ENSP00000233575	908
SAA1	ENSP00000308762	TNF	ENSP00000229681	900
CXCL16	ENSP00000293778	CXCR4*	ENSP00000241393	926
PAH*	ENSP00000303500	GCG	ENSP00000233604	900
FOS*	ENSP00000306245	NR3C1	ENSP00000231509	919
GNG4*	ENSP00000303478	GCG	ENSP00000233604	900
VEGFA	ENSP00000317598	SERPINE1	ENSP00000223095	905
ADM	ENSP00000278175	RAMP1*	ENSP00000254661	900
PDE3B*	ENSP00000282096	INS	ENSP00000250971	900

Symbol	StringID	Symbol	StringID	CS
PTH*	ENSP00000282091	INS	ENSP00000250971	905
XBP1*	ENSP00000343155	ESR1	ENSP00000206249	967
IGF1	ENSP00000302665	IGFBP5*	ENSP00000233813	991
IGF1	ENSP00000302665	IGFBP2*	ENSP00000233809	992
ENSP00000277541*	ENSP00000277541	JAG1	ENSP00000254958	900
ENSP00000352471*	ENSP00000352471	CETP	ENSP00000200676	935
PCSK9	ENSP00000303208	APOB	ENSP00000233242	903
IGF1	ENSP00000302665	GCG	ENSP00000233604	927
VEGFA	ENSP00000317598	HGF	ENSP00000222390	917
WDR48*	ENSP00000307491	TNF	ENSP00000229681	900
LEP	ENSP00000312652	CCL2*	ENSP00000225831	900
AGTR1	ENSP00000273430	AGT	ENSP00000258224	996
GNA5*	ENSP00000302237	GCG	ENSP00000233604	932
NCOR1*	ENSP00000268712	PPARA	ENSP00000262735	969
ADM	ENSP00000278175	RAMP2*	ENSP00000253796	970
PIK3R1*	ENSP00000274335	PDGFRA	ENSP00000257290	902
SERPING1*	ENSP00000278407	F12	ENSP00000253496	969
IRS1	ENSP00000304895	IL4*	ENSP00000231449	921
MET*	ENSP00000317272	HGF	ENSP00000222390	998
VEGFA	ENSP00000317598	EPOR*	ENSP00000222139	910
FGF7*	ENSP00000267843	IL1A	ENSP00000263339	900
LPL	ENSP00000309757	APOA5	ENSP00000227665	911
PDGFC*	ENSP00000274071	PDGFRA	ENSP00000257290	999
DNPEP*	ENSP00000273075	AGT	ENSP00000258224	938
ABCA1	ENSP00000297693	APOA1	ENSP00000236850	969
EIF4E*	ENSP00000280892	INS	ENSP00000250971	900
MMP1*	ENSP00000322788	TIMP1	ENSP00000218388	993
VEGFA	ENSP00000317598	TGFB1	ENSP00000221930	905
ITIH4*	ENSP00000266041	ICAM1	ENSP00000264832	900
SMAD4*	ENSP00000341551	ESR1	ENSP00000206249	942
NFKBIL1*	ENSP00000306626	TNF	ENSP00000229681	923
ETS1*	ENSP00000324578	MMP9	ENSP00000216953	905
IL8*	ENSP00000306512	TNF	ENSP00000229681	950

Symbol	StringID	Symbol	StringID	CS
FOXO1A*	ENSP00000280496	INS	ENSP00000250971	903
IRS1	ENSP00000304895	GHR*	ENSP00000230882	937
STAT5A*	ENSP00000341208	ESR1	ENSP00000206249	972
TSC22D1*	ENSP00000317053	TGFB1	ENSP00000221930	913
FOS*	ENSP00000306245	TNF	ENSP00000229681	984
COL3A1	ENSP00000304408	SPARC*	ENSP00000231061	947
CXCL11	ENSP00000306884	IFNG*	ENSP00000229135	926
MCL1*	ENSP00000271648	IL6	ENSP00000258743	913
ENSP00000272190*	ENSP00000272190	AGT	ENSP00000258224	912
GNGT9*	ENSP00000300873	GCG	ENSP00000233604	900
THBD	ENSP00000315029	SERPINE1	ENSP00000223095	940
PTPRC*	ENSP00000271610	IL6	ENSP00000258743	912
FURIN*	ENSP00000268171	F7	ENSP00000261967	900
TIF1*	ENSP00000340507	ESR1	ENSP00000206249	983
CXCL10*	ENSP00000305651	TNF	ENSP00000229681	936
ENSP00000265171*	ENSP00000265171	STAT3	ENSP00000264657	915
JUN*	ENSP00000314522	SERPINE1	ENSP00000223095	900
CEBPB*	ENSP00000305422	TNF	ENSP00000229681	913
LEPR	ENSP00000330393	JAK2*	ENSP00000212292	994
PRO1400*	ENSP00000264998	ENSP00000264613*	ENSP00000264613	905
TP53*	ENSP00000269305	THBS1	ENSP00000260356	904
FBLN5	ENSP00000267620	LOXL1*	ENSP00000261921	968
TYK2*	ENSP00000264818	STAT3	ENSP00000264657	984
CLU*	ENSP00000315130	PON1	ENSP00000222381	964
MAOB*	ENSP00000265833	DBH	ENSP00000263611	967
CHUK*	ENSP00000266054	IL1A	ENSP00000263339	905
POMC*	ENSP00000264708	STAT3	ENSP00000264657	974
PTEN*	ENSP00000304973	TNF	ENSP00000229681	911
IL13*	ENSP00000304915	TNF	ENSP00000229681	934
IRS1	ENSP00000304895	TNF	ENSP00000229681	920
FOXO3A*	ENSP00000339527	ESR1	ENSP00000206249	958
CAV1*	ENSP00000339191	ESR1	ENSP00000206249	967
SERPINA5	ENSP00000298842	PROC*	ENSP00000234071	995

Symbol	StringID	Symbol	StringID	CS
MTRR	ENSP00000264668	MTR*	ENSP00000264178	912
HSP90B1*	ENSP00000299767	APOB	ENSP00000233242	983
ZNF398*	ENSP00000338984	ESR1	ENSP00000206249	952
ICAM1	ENSP00000264832	TNFRSF8*	ENSP00000263932	900
IGF1	ENSP00000302665	GHR*	ENSP00000230882	951
CD14*	ENSP00000304236	TNF	ENSP00000229681	943
ICAM1	ENSP00000264832	IL7*	ENSP00000263851	900
SPG7*	ENSP00000268704	TLR2	ENSP00000260010	900
STAT3	ENSP00000264657	KDR*	ENSP00000263923	900
ETV4*	ENSP00000321835	MMP9	ENSP00000216953	900
GFM1*	ENSP00000264263	ECE1	ENSP00000264205	900
ICAM1	ENSP00000264832	ELA2*	ENSP00000263621	900
CTLA4*	ENSP00000303939	TNF	ENSP00000229681	928
JUN*	ENSP00000314522	TGFB1	ENSP00000221930	910
PEX5*	ENSP00000266564	SCARB1	ENSP00000261693	947
LIPC	ENSP00000299022	APOB	ENSP00000233242	968
ICAM1	ENSP00000264832	IL1B*	ENSP00000263341	905
ICAM1	ENSP00000264832	IL1A	ENSP00000263339	900
F2R	ENSP00000321326	PROCR*	ENSP00000216968	911
DEFB2*	ENSP00000303532	TNF	ENSP00000229681	900
POMC*	ENSP00000264708	IL1A	ENSP00000263339	903
GNG12*	ENSP00000304013	GNB3	ENSP00000229264	977
CDX2*	ENSP00000298359	GCG	ENSP00000233604	908
STAT3	ENSP00000264657	IL1A	ENSP00000263339	903
TP53*	ENSP00000269305	IL6	ENSP00000258743	907
BRCA1*	ENSP00000337814	ESR1	ENSP00000206249	997
STAT3	ENSP00000264657	EP300*	ENSP00000263253	992
IL11*	ENSP00000264563	IL1A	ENSP00000263339	900
ICAM1	ENSP00000264832	MAPK3*	ENSP00000263025	900
FGFB*	ENSP00000264498	IL1A	ENSP00000263339	903
ITGB2*	ENSP00000303242	TNF	ENSP00000229681	905
GP5*	ENSP00000319286	F9	ENSP00000218099	900
STAT3	ENSP00000264657	MAPK3*	ENSP00000263025	997

Symbol	StringID	Symbol	StringID	CS
PPARGC1A*	ENSP00000264867	PPARA	ENSP00000262735	999
ELN*	ENSP00000313565	TGFB1	ENSP00000221930	900
IL1RL2*	ENSP00000264257	IL1A	ENSP00000263339	915
HSPA4*	ENSP00000302961	TNF	ENSP00000229681	900
HP	ENSP00000276297	RHOBTB2*	ENSP00000251822	900
GNG4*	ENSP00000303478	GNB3	ENSP00000229264	993
VEGFA	ENSP00000317598	MMP2	ENSP00000219070	905
PLA2G4A*	ENSP00000264143	IL1A	ENSP00000263339	910
TP53*	ENSP00000269305	AGT	ENSP00000258224	920
HFE	ENSP00000311698	TFR2*	ENSP00000223051	989
IGF1	ENSP00000302665	TNF	ENSP00000229681	922
F2R	ENSP00000321326	CTSG*	ENSP00000216336	960
BCL2L1*	ENSP00000302564	TNF	ENSP00000229681	908
IFNB1*	ENSP00000302523	TNF	ENSP00000229681	921
MAP2K1*	ENSP00000302486	TNF	ENSP00000229681	910
LCAT	ENSP00000264005	PLD2*	ENSP00000263088	900
INHBE*	ENSP00000266646	CYP19A1	ENSP00000260433	900
STAT3	ENSP00000264657	CREBBP*	ENSP00000262367	979
SLC9A1	ENSP00000263980	MAPK3*	ENSP00000263025	903
CCL11	ENSP00000302234	TNF	ENSP00000229681	916
ENSP00000302150*	ENSP00000302150	TNF	ENSP00000229681	902
GNRH1*	ENSP00000276414	INS	ENSP00000250971	900
ENSP00000264613*	ENSP00000264613	FECH*	ENSP00000262093	917
FADD*	ENSP00000301838	TNF	ENSP00000229681	932
GPC3*	ENSP00000276212	INS	ENSP00000250971	900
TGFB2	ENSP00000264103	TGFBR1*	ENSP00000262458	999
SYTL4*	ENSP00000276141	INS	ENSP00000250971	943
FGF7*	ENSP00000267843	IL6	ENSP00000258743	900
GNAS*	ENSP00000302237	GNB3	ENSP00000229264	992
PF4	ENSP00000296029	PROC*	ENSP00000234071	967
HFE	ENSP00000311698	HAMP*	ENSP00000222304	906
POMC*	ENSP00000264708	SCARB1	ENSP00000261693	924
MGLL*	ENSP00000265052	LIPG	ENSP00000261292	900

Symbol	StringID	Symbol	StringID	CS
TGFB1	ENSP00000306306	COL1A1*	ENSP00000225964	946
SELP	ENSP00000263686	ITGA2B	ENSP00000262407	900
MTMR1*	ENSP00000317099	RENB	ENSP00000218151	900
ICAM1	ENSP00000264832	SYT1*	ENSP00000261205	902
EP300*	ENSP00000263253	PPARA	ENSP00000262735	989
IGFBP1	ENSP00000275525	INS	ENSP00000250971	900
IGFBP3*	ENSP00000275521	INS	ENSP00000250971	900
EGFR*	ENSP00000275493	INS	ENSP00000250971	900
STAT3	ENSP00000264657	SYT1*	ENSP00000261205	903
UCP1*	ENSP00000262999	PPARA	ENSP00000262735	902
NFATC3*	ENSP00000300659	TNF	ENSP00000229681	978
SLC9A1	ENSP00000263980	ROCK1*	ENSP00000261535	997
CARD15*	ENSP00000300589	TNF	ENSP00000229681	923
TGFB2	ENSP00000264103	PZP*	ENSP00000261336	945
IL1A	ENSP00000263339	SERPINA3*	ENSP00000261981	900
GNGT9*	ENSP00000300873	GNB3	ENSP00000229264	979
GYS1	ENSP00000317904	PYGB*	ENSP00000216962	908
STAT6*	ENSP00000300134	TNF	ENSP00000229681	922
VEGFA	ENSP00000317598	MMP9	ENSP00000216953	909
NOS3	ENSP00000297494	RARS*	ENSP00000231572	900
NOX4*	ENSP00000263317	CYBA	ENSP00000261623	939
MMP3	ENSP00000299855	TNF	ENSP00000229681	909
FGFB*	ENSP00000264498	THBS1	ENSP00000260356	904
AGTR1	ENSP00000273430	RAF1*	ENSP00000251849	928
IGF1	ENSP00000302665	CCND1*	ENSP00000227507	908
PPARBP*	ENSP00000300651	VDR	ENSP00000229022	967
PIK3R1*	ENSP00000274335	INS	ENSP00000250971	900
VCAM1	ENSP00000294728	ITGA4*	ENSP00000233573	994
TNFRSF11B	ENSP00000297350	IL4*	ENSP00000231449	918
HP	ENSP00000276297	RAC2*	ENSP00000249071	900
MTA1*	ENSP00000333633	ESR1	ENSP00000206249	959
GYS1	ENSP00000317904	PYGL*	ENSP00000216392	908
SERPINB2	ENSP00000299502	TNF	ENSP00000229681	900

Symbol	StringID	Symbol	StringID	CS
IRS1	ENSP00000304895	RPS6KB1*	ENSP00000225577	907
BF*	ENSP00000299370	TNF	ENSP00000229681	921
ITGA2B	ENSP00000262407	ITGB3	ENSP00000262017	999
PPARA	ENSP00000262735	SREBF1	ENSP00000261646	900
PSEN2*	ENSP00000272148	APOE	ENSP00000252486	903
CSF2	ENSP00000296871	IL5*	ENSP00000231454	937
CSF2	ENSP00000296871	IL4*	ENSP00000231449	936
GNG3*	ENSP00000294117	GCG	ENSP00000233604	900
SMAD2*	ENSP00000309498	TGFB1	ENSP00000221930	998
STAT3	ENSP00000264657	MYC*	ENSP00000259523	900
USF1	ENSP00000289790	CREB1*	ENSP00000236996	904
APOA2*	ENSP00000289906	APOA1	ENSP00000236850	924
VEGFA	ENSP00000317598	HMOX1	ENSP00000216117	913
ELA2*	ENSP00000263621	THBS1	ENSP00000260356	948
IL15	ENSP00000296545	IL4*	ENSP00000231449	928
ICAM1	ENSP00000264832	IL10*	ENSP00000259152	911
EDNRA	ENSP00000315011	POLI*	ENSP00000217800	900
CASP7*	ENSP00000298700	TNF	ENSP00000229681	909
ITGA2B	ENSP00000262407	VWF*	ENSP00000261405	993
STAT3	ENSP00000264657	IL10*	ENSP00000259152	922
TIAL1*	ENSP00000298518	TNF	ENSP00000229681	909
AXIN1*	ENSP00000262320	LRP6	ENSP00000261349	972
IL1A	ENSP00000263339	CASP1*	ENSP00000260309	909
VEGFA	ENSP00000317598	OSM*	ENSP00000215781	902
ICAM1	ENSP00000264832	IL6	ENSP00000258743	909
POMC*	ENSP00000264708	IL6	ENSP00000258743	929
STAT3	ENSP00000264657	IL6	ENSP00000258743	922
ENPEP*	ENSP00000265162	AGT	ENSP00000258224	917
IL1A	ENSP00000263339	TLR2	ENSP00000260010	915
ITGB2*	ENSP00000303242	ICAM2	ENSP00000225760	999
IL11*	ENSP00000264563	IL6	ENSP00000258743	927
FANCG*	ENSP00000298002	TNF	ENSP00000229681	902
MTHFR	ENSP00000315965	MTHFD1*	ENSP00000216605	981

Symbol	StringID	Symbol	StringID	CS
FGFB*	ENSP00000264498	IL6	ENSP00000258743	911
GCLM	ENSP00000263891	GAD2*	ENSP00000259271	900
HSPG2*	ENSP00000270945	APOE	ENSP00000252486	972
MAPK3*	ENSP00000263025	TLR2	ENSP00000260010	902
GCLM	ENSP00000263891	EPRS*	ENSP00000259146	900
ICAM1	ENSP00000264832	AGT	ENSP00000258224	900
IGFBP1	ENSP00000275525	GFER*	ENSP00000248114	900
THBD	ENSP00000315029	PROCR*	ENSP00000216968	900
STAT3	ENSP00000264657	AGT	ENSP00000258224	919
CALM1*	ENSP00000272298	INS	ENSP00000250971	900
CDX2*	ENSP00000298359	VDR	ENSP00000229022	900
NOS3	ENSP00000297494	TNF	ENSP00000229681	921
ENSP00000272190*	ENSP00000272190	INS	ENSP00000250971	900
FGFB*	ENSP00000264498	AGT	ENSP00000258224	904
TNFRSF11B	ENSP00000297350	TNF	ENSP00000229681	931
ALOX5*	ENSP00000265455	CYP2J2	ENSP00000257149	900
IL1A	ENSP00000263339	IL1RN*	ENSP00000259206	991
IL1A	ENSP00000263339	IL10*	ENSP00000259152	926
JUN*	ENSP00000314522	MMP9	ENSP00000216953	905
ECE1	ENSP00000264205	AGT	ENSP00000258224	904
ITGB3	ENSP00000262017	THBS1	ENSP00000260356	943
VCAM1	ENSP00000294728	IL4*	ENSP00000231449	914
CSF2	ENSP00000296871	TNF	ENSP00000229681	944
IL3*	ENSP00000296870	TNF	ENSP00000229681	900
TLR3*	ENSP00000296795	TNF	ENSP00000229681	931
IL1B*	ENSP00000263341	IL6	ENSP00000258743	933
IL1A	ENSP00000263339	IL6	ENSP00000258743	929
CYBA	ENSP00000261623	NOX5*	ENSP00000260364	900
IL15	ENSP00000296545	TNF	ENSP00000229681	938
GP1BA	ENSP00000329380	OSGEP*	ENSP00000206542	963
SELE	ENSP00000331736	GLG1*	ENSP00000205061	970
IL8*	ENSP00000306512	TGFB1	ENSP00000221930	900
CSF2	ENSP00000296871	IFNG*	ENSP00000229135	929

Symbol	StringID	Symbol	StringID	CS
CCR1*	ENSP00000296140	TNF	ENSP00000229681	909
SLC2A1	ENSP00000270929	INS	ENSP00000250971	900
ADIPOQ	ENSP00000320709	SIRT1*	ENSP00000212015	900
CXCL1*	ENSP00000296031	TNF	ENSP00000229681	914
TSG14*	ENSP00000295927	TNF	ENSP00000229681	921
FOS*	ENSP00000306245	TGFB1	ENSP00000221930	911
ALB*	ENSP00000295897	TNF	ENSP00000229681	900
ITGAV*	ENSP00000261023	THBS1	ENSP00000260356	987
IL15	ENSP00000296545	IFNG*	ENSP00000229135	932
SLC2A5	ENSP00000270684	INS	ENSP00000250971	900
SP1*	ENSP00000329357	ESR1	ENSP00000206249	971
IRAK3*	ENSP00000261233	TLR2	ENSP00000260010	912
MAPK3*	ENSP00000263025	AGT	ENSP00000258224	907
STAT5B*	ENSP00000293328	NR3C1	ENSP00000231509	970
SCARB1	ENSP00000261693	NR5A1*	ENSP00000259458	903
INSR	ENSP00000303830	ENSP00000223366*	ENSP00000223366	900
IRS1	ENSP00000304895	PIK3CG*	ENSP00000222569	931
GOLGA6*	ENSP00000290438	GCG	ENSP00000233604	900
CSF2	ENSP00000296871	CD69*	ENSP00000228434	908
AKT1*	ENSP00000270202	INS	ENSP00000250971	900
SMAD2*	ENSP00000309498	MMP2	ENSP00000219070	900
RNF130*	ENSP00000261947	IL6	ENSP00000258743	900
CSF2	ENSP00000296871	KITLG*	ENSP00000228280	950
IRS1	ENSP00000304895	PIK3R2*	ENSP00000222254	999
REL*	ENSP00000295025	TNF	ENSP00000229681	924
SERPINB2	ENSP00000299502	VTN	ENSP00000226218	900
EPHX1*	ENSP00000272167	GSTT1	ENSP00000248935	902
MAPKAPK2*	ENSP00000294981	TNF	ENSP00000229681	990
IL15	ENSP00000296545	CD69*	ENSP00000228434	908
MMP3	ENSP00000299855	CCL2*	ENSP00000225831	967
FCGR3A*	ENSP00000294800	TNF	ENSP00000229681	904
VCAM1	ENSP00000294728	TNF	ENSP00000229681	933
IL13*	ENSP00000304915	TGFB1	ENSP00000221930	914

Symbol	StringID	Symbol	StringID	CS
MEOX2*	ENSP00000262041	AGT	ENSP00000258224	922
POU4F1*	ENSP00000282002	EGR1	ENSP00000239938	915
IGFBP4*	ENSP00000269593	INS	ENSP00000250971	900
ERBB2*	ENSP00000269571	INS	ENSP00000250971	900
FGA	ENSP00000306361	PLAT*	ENSP00000220809	905
POU2F2*	ENSP00000292077	NR3C1	ENSP00000231509	982
INSR	ENSP00000303830	PBEF1*	ENSP00000222553	900
APOA2*	ENSP00000289906	APOB	ENSP00000233242	990
CDA*	ENSP00000289839	APOB	ENSP00000233242	900
TP53*	ENSP00000269305	INS	ENSP00000250971	900
IL1A	ENSP00000263339	NGFB*	ENSP00000256655	900
SYT1*	ENSP00000261205	IL6	ENSP00000258743	907
CYP19A1	ENSP00000260433	NR5A1*	ENSP00000259458	923
G6PC3*	ENSP00000269097	INS	ENSP00000250971	900
IL1A	ENSP00000263339	IRAK2*	ENSP00000256458	900
VCAM1	ENSP00000294728	IFNG*	ENSP00000229135	922
IGF1	ENSP00000302665	SERPINE1	ENSP00000223095	900
TNFSF12*	ENSP00000293826	TNF	ENSP00000229681	926
F11	ENSP00000264691	VPS4A*	ENSP00000254950	900
GNG3*	ENSP00000294117	GNB3	ENSP00000229264	998
MAT2A*	ENSP00000303147	HGF	ENSP00000222390	900
IFI44*	ENSP00000260529	IL6	ENSP00000258743	900
C4BPA*	ENSP00000264304	APCS	ENSP00000255040	905
PLA2G1B	ENSP00000312286	MAPK1*	ENSP00000215832	960
ADM	ENSP00000278175	RAMP3*	ENSP00000242249	978
ITGA5*	ENSP00000293379	TNF	ENSP00000229681	900
TLR2	ENSP00000260010	IL10*	ENSP00000259152	928
CCL5*	ENSP00000293272	TNF	ENSP00000229681	914
PDGFRB*	ENSP00000261799	PDGFRA	ENSP00000257290	998
CXCL16	ENSP00000293778	IFNG*	ENSP00000229135	912
JUNB*	ENSP00000303315	TGFB1	ENSP00000221930	907
CSF2	ENSP00000296871	IL2*	ENSP00000226730	942
HOXB4*	ENSP00000328928	THPO	ENSP00000204615	900

Symbol	StringID	Symbol	StringID	CS
F2	ENSP00000308541	F9	ENSP00000218099	934
TLR2	ENSP00000260010	IL6	ENSP00000258743	922
IFI44*	ENSP00000260529	AGT	ENSP00000258224	900
IGF1R*	ENSP00000268035	INS	ENSP00000250971	989
IL15	ENSP00000296545	IL2*	ENSP00000226730	946
NOX5*	ENSP00000260364	AGT	ENSP00000258224	900
NPPA	ENSP00000309540	AVP*	ENSP00000217172	916
NR2F1*	ENSP00000325819	ESR1	ENSP00000206249	928
SST*	ENSP00000287641	GCG	ENSP00000233604	908
PLD2*	ENSP00000263088	PNMT	ENSP00000255389	900
KNG1*	ENSP00000265023	F12	ENSP00000253496	992
CARM1*	ENSP00000325690	ESR1	ENSP00000206249	931
TGFBI	ENSP00000306306	ACD*	ENSP00000219251	900
IDE*	ENSP00000265986	APOE	ENSP00000252486	910
NOTCH3*	ENSP00000263388	JAG1	ENSP00000254958	998
IL8*	ENSP00000306512	MMP2	ENSP00000219070	900
CCR2*	ENSP00000292301	TNF	ENSP00000229681	912
IL6R*	ENSP00000292208	TNF	ENSP00000229681	927
BLR1*	ENSP00000292174	TNF	ENSP00000229681	907
F11	ENSP00000264691	F12	ENSP00000253496	930
KLKB1*	ENSP00000264690	F12	ENSP00000253496	995
IL1RN*	ENSP00000259206	IL6	ENSP00000258743	911
STAT3	ENSP00000264657	GFAP*	ENSP00000253408	900
IL10*	ENSP00000259152	IL6	ENSP00000258743	961
SLC2A1	ENSP00000270929	CANX*	ENSP00000247461	946
CSF2	ENSP00000296871	CCL2*	ENSP00000225831	906
ITGA2	ENSP00000296585	COL1A1*	ENSP00000225964	999
ITGB5*	ENSP00000296181	VTN	ENSP00000226218	980
IPF1*	ENSP00000266950	INS	ENSP00000250971	910
ENSP00000301873*	ENSP00000301873	TGFB1	ENSP00000221930	974
LPL	ENSP00000309757	ADPN*	ENSP00000216180	900
ADM	ENSP00000278175	IAPP*	ENSP00000240652	900
CSF2	ENSP00000296871	CSF3*	ENSP00000225474	939

Symbol	StringID	Symbol	StringID	CS
DBH	ENSP00000263611	AOC2*	ENSP00000253799	900
MMP3	ENSP00000299855	SERPINE1	ENSP00000223095	925
SERPINB2	ENSP00000299502	SERPINE1	ENSP00000223095	933
IL6	ENSP00000258743	AGT	ENSP00000258224	927
ENSP00000266053*	ENSP00000266053	INS	ENSP00000250971	900
IL1A	ENSP00000263339	INDO*	ENSP00000253513	900
IDE*	ENSP00000265986	INS	ENSP00000250971	969
CYP1A1	ENSP00000268062	GSTT1	ENSP00000248935	965
PDIA4*	ENSP00000286091	APOB	ENSP00000233242	983
AGTR1	ENSP00000273430	PLCG1*	ENSP00000244007	944
F11	ENSP00000264691	TSG101*	ENSP00000251968	913
TLR2	ENSP00000260010	IRAK2*	ENSP00000256458	900
LRP2*	ENSP00000263816	APOE	ENSP00000252486	911
EDA*	ENSP00000289824	TNF	ENSP00000229681	910
F2	ENSP00000308541	SERPIND1	ENSP00000215727	993
CYP3A4	ENSP00000337915	GSTP1*	ENSP00000196968	917
ENSP00000265171*	ENSP00000265171	INS	ENSP00000250971	900
PRO1400*	ENSP00000264998	INS	ENSP00000250971	900
IL8*	ENSP00000306512	MMP9	ENSP00000216953	925
PPARGC1A*	ENSP00000264867	INS	ENSP00000250971	900
ICAM1	ENSP00000264832	INS	ENSP00000250971	900
VCAM1	ENSP00000294728	CSF3*	ENSP00000225474	900
POMC*	ENSP00000264708	INS	ENSP00000250971	900
STAT3	ENSP00000264657	INS	ENSP00000250971	900
ADAM10*	ENSP00000260408	JAG1	ENSP00000254958	905
FGFB*	ENSP00000264498	INS	ENSP00000250971	900
LEP	ENSP00000312652	JAK2*	ENSP00000212292	909
TRIM63*	ENSP00000288918	TNF	ENSP00000229681	900
GNRH1*	ENSP00000276414	EGR1	ENSP00000239938	925
GP9*	ENSP00000303942	F9	ENSP00000218099	900
ATF2*	ENSP00000264110	INS	ENSP00000250971	900
SERPINB2	ENSP00000299502	PLAUR*	ENSP00000221264	971
MAPT*	ENSP00000262410	APOE	ENSP00000252486	992

Symbol	StringID	Symbol	StringID	CS
GRB14*	ENSP00000263915	INS	ENSP00000250971	900
NCOA1*	ENSP00000320940	ESR1	ENSP00000206249	997
ATBF1*	ENSP00000268489	F10	ENSP00000246496	900
SERPINB2	ENSP00000299502	PLAT*	ENSP00000220809	990
IL8*	ENSP00000306512	MIF	ENSP00000215754	900
NFX1*	ENSP00000353576	PTGS2	ENSP00000186982	900
FURIN*	ENSP00000268171	F10	ENSP00000246496	914
EGFR*	ENSP00000275493	EGR1	ENSP00000239938	912
BCL2*	ENSP00000353498	PTGS2	ENSP00000186982	913
SCARB1	ENSP00000261693	APOE	ENSP00000252486	980
STAT3	ENSP00000264657	PIAS1*	ENSP00000249636	920
ITGAM*	ENSP00000287497	TNF	ENSP00000229681	911
MAPK3*	ENSP00000263025	INS	ENSP00000250971	900
FBXO32*	ENSP00000287396	TNF	ENSP00000229681	919
UCP1*	ENSP00000262999	INS	ENSP00000250971	900
BAG4*	ENSP00000287322	TNF	ENSP00000229681	909
SERPINA5	ENSP00000298842	PLAT*	ENSP00000220809	933
COL1A2*	ENSP00000297268	TGFB1	ENSP00000221930	904
HP	ENSP00000276297	RHOQ*	ENSP00000238738	900
PPARA	ENSP00000262735	INS	ENSP00000250971	900
STAT3	ENSP00000264657	LIF*	ENSP00000249075	908
ID1*	ENSP00000262656	INS	ENSP00000250971	900
IL15	ENSP00000296545	JAK3*	ENSP00000222246	920
PTH*	ENSP00000282091	GCG	ENSP00000233604	905
CXCL13*	ENSP00000286758	TNF	ENSP00000229681	930
WWP1*	ENSP00000265428	KLF2	ENSP00000248071	967
IL6	ENSP00000258743	SDC1*	ENSP00000254351	900
IRS1	ENSP00000304895	MAPK1*	ENSP00000215832	998
HEY2*	ENSP00000258012	JAG1	ENSP00000254958	902
MCH4*	ENSP00000286186	TNF	ENSP00000229681	905
SORL1*	ENSP00000260197	APOE	ENSP00000252486	919
SREBF1	ENSP00000261646	INS	ENSP00000250971	900
TGFBR2*	ENSP00000295754	TGFB1	ENSP00000221930	999

Symbol	StringID	Symbol	StringID	CS
MAP2K1*	ENSP00000302486	MMP9	ENSP00000216953	903
IL15	ENSP00000296545	IL12RB1*	ENSP00000221270	930
ILK*	ENSP00000299421	MMP2	ENSP00000219070	902
INSR	ENSP00000303830	MAPK1*	ENSP00000215832	944
RHOB*	ENSP00000272233	KALRN	ENSP00000240874	900
IL6	ENSP00000258743	GFAP*	ENSP00000253408	900
TGFA*	ENSP00000295400	TGFB1	ENSP00000221930	920
CA2*	ENSP00000285379	TNF	ENSP00000229681	900
VEGFA	ENSP00000317598	ESR1	ENSP00000206249	907
MMP3	ENSP00000299855	TIMP1	ENSP00000218388	999
IL1A	ENSP00000263339	HSPB1*	ENSP00000248553	900
NOTCH2*	ENSP00000256646	JAG1	ENSP00000254958	998
PCAF*	ENSP00000263754	KLF2	ENSP00000248071	900
ECE1	ENSP00000264205	EDN2	ENSP00000247589	902
IL6	ENSP00000258743	EPO	ENSP00000252723	917
LRP6	ENSP00000261349	WISP1*	ENSP00000250160	912
ENSP00000302150*	ENSP00000302150	HMOX1	ENSP00000216117	900
IGF2	ENSP00000348986	PTGS2	ENSP00000186982	900
AGT	ENSP00000258224	MAS1*	ENSP00000252660	923
IGF1	ENSP00000302665	IGFALS*	ENSP00000215539	970
AGT	ENSP00000258224	ACE2*	ENSP00000252519	974
SDC2*	ENSP00000307046	TGFBR3	ENSP00000212355	967
COG2*	ENSP00000258255	LDLR	ENSP00000252444	902
CD8A*	ENSP00000283635	TNF	ENSP00000229681	907
NOVH*	ENSP00000259526	INS	ENSP00000250971	914
ITGA5*	ENSP00000293379	TGFB1	ENSP00000221930	900
ARNT*	ENSP00000315637	ESR1	ENSP00000206249	970
GAD2*	ENSP00000259271	INS	ENSP00000250971	900
P23*	ENSP00000347788	PTGS2	ENSP00000186982	905
HP	ENSP00000276297	RHOU*	ENSP00000235211	900
VEGFA	ENSP00000317598	THPO	ENSP00000204615	900
ILK*	ENSP00000299421	MMP9	ENSP00000216953	913
STAT3	ENSP00000264657	IRF1*	ENSP00000245414	914

Symbol	StringID	Symbol	StringID	CS
IL6	ENSP00000258743	INS	ENSP00000250971	900
ITGAM*	ENSP00000287497	ICAM2	ENSP00000225760	993
TBC1D4*	ENSP00000258610	INS	ENSP00000250971	900
TIA1*	ENSP00000282574	TNF	ENSP00000229681	914
CYP1A1	ENSP00000268062	AHR*	ENSP00000242057	910
JUN*	ENSP00000314522	ESR1	ENSP00000206249	972
TLR4	ENSP00000346893	PTGS2	ENSP00000186982	916
DBH	ENSP00000263611	BMP2*	ENSP00000246044	900
AGT	ENSP00000258224	INS	ENSP00000250971	900
IL1A	ENSP00000263339	BMP2*	ENSP00000246044	900
STAT3	ENSP00000264657	CDKN1A*	ENSP00000244741	952
ENG*	ENSP00000291836	TGFB1	ENSP00000221930	984
CLDN1*	ENSP00000295522	MMP2	ENSP00000219070	975
TNFSF4*	ENSP00000281834	TNF	ENSP00000229681	923
IRS1	ENSP00000304895	JAK2*	ENSP00000212292	992
GCLM	ENSP00000263891	GOT2*	ENSP00000245206	900
MMP3	ENSP00000299855	OSM*	ENSP00000215781	900
PENT*	ENSP00000269582	EGR1	ENSP00000239938	906
CYP2J2	ENSP00000257149	ALOX12*	ENSP00000251535	900
HNF1A*	ENSP00000257555	INS	ENSP00000250971	900
IL2RA*	ENSP00000281359	TNF	ENSP00000229681	931
TP53*	ENSP00000269305	EGR1	ENSP00000239938	927
PF4	ENSP00000296029	GATA1*	ENSP00000218266	913
PTH*	ENSP00000282091	VDR	ENSP00000229022	913
ABCA1	ENSP00000297693	PLTP*	ENSP00000216947	970
F7	ENSP00000261967	F10	ENSP00000246496	994
PTGES2*	ENSP00000345341	PTGS2	ENSP00000186982	976
PTGER3	ENSP00000345004	PTGS2	ENSP00000186982	903
IL1A	ENSP00000263339	CDKN1A*	ENSP00000244741	907
IL6	ENSP00000258743	LIF*	ENSP00000249075	913
USF1	ENSP00000289790	USF2*	ENSP00000222305	901
IL18*	ENSP00000280357	TNF	ENSP00000229681	942
MBTPS1*	ENSP00000344223	PTGS2	ENSP00000186982	918

Symbol	StringID	Symbol	StringID	CS
RHOF*	ENSP00000267205	KALRN	ENSP00000240874	907
IL17*	ENSP00000344192	PTGS2	ENSP00000186982	904
CD44*	ENSP00000278385	HBEGF	ENSP00000230990	969
FABP4*	ENSP00000256104	INS	ENSP00000250971	900
ENSP00000264613*	ENSP00000264613	ATP7B*	ENSP00000242839	904
IGF1	ENSP00000302665	JAK2*	ENSP00000212292	918
SDC1*	ENSP00000254351	APOE	ENSP00000252486	900
STAT3	ENSP00000264657	CNTFR*	ENSP00000242338	916
IL15	ENSP00000296545	IL2RB*	ENSP00000216223	999
SMAD6*	ENSP00000288840	TGFB1	ENSP00000221930	953
CD40	ENSP00000279061	TNF	ENSP00000229681	925
CYP7B1*	ENSP00000310721	ESR1	ENSP00000206249	913
IL1A	ENSP00000263339	TNFAIP6*	ENSP00000243347	900
PTGES*	ENSP00000342385	PTGS2	ENSP00000186982	975
CD44*	ENSP00000278385	TNF	ENSP00000229681	931
STAT3	ENSP00000264657	CXCR4*	ENSP00000241393	956
ZFYVE9*	ENSP00000287727	TGFB1	ENSP00000221930	958
AKT2*	ENSP00000309428	ESR1	ENSP00000206249	948
ABCB1*	ENSP00000265724	EGR1	ENSP00000239938	900
APOC1*	ENSP00000252491	APOE	ENSP00000252486	937
APOC4*	ENSP00000252489	APOE	ENSP00000252486	990
APOC1*	ENSP00000252491	LDLR	ENSP00000252444	913
APOE	ENSP00000252486	LDLR	ENSP00000252444	997
G6PC*	ENSP00000253801	INS	ENSP00000250971	900
SRF*	ENSP00000265354	EGR1	ENSP00000239938	926
PITX1*	ENSP00000265340	EGR1	ENSP00000239938	923
NPR3	ENSP00000265074	NPPB	ENSP00000240174	929
EGFR*	ENSP00000275493	HBEGF	ENSP00000230990	999
CCL5*	ENSP00000293272	MMP9	ENSP00000216953	900
ENSP00000265171*	ENSP00000265171	EGR1	ENSP00000239938	922
IL6	ENSP00000258743	BIRC4*	ENSP00000245836	900
JAG1	ENSP00000254958	HOXD3*	ENSP00000249440	907
APP*	ENSP00000284981	SERPINE1	ENSP00000223095	924

Symbol	StringID	Symbol	StringID	CS
MYB*	ENSP00000339992	PTGS2	ENSP00000186982	909
IL6	ENSP00000258743	IRF1*	ENSP00000245414	922
TNFRSF10B*	ENSP00000276431	TNF	ENSP00000229681	909
CYP2E1*	ENSP00000252945	INS	ENSP00000250971	900
FGFB*	ENSP00000264498	EGR1	ENSP00000239938	905
TADA3L*	ENSP00000307684	ESR1	ENSP00000206249	961
ATF2*	ENSP00000264110	NPPB	ENSP00000240174	900
CAV1*	ENSP00000339191	PTGS2	ENSP00000186982	972
IKBKB*	ENSP00000339151	PTGS2	ENSP00000186982	912
APOE	ENSP00000252486	INS	ENSP00000250971	900
THBS1	ENSP00000260356	TNFAIP6*	ENSP00000243347	953
LDLR	ENSP00000252444	INS	ENSP00000250971	900
KLF10*	ENSP00000285407	TGFB1	ENSP00000221930	913
IL6	ENSP00000258743	CDKN1A*	ENSP00000244741	915
ETV5*	ENSP00000306894	ESR1	ENSP00000206249	900
THBS1	ENSP00000260356	LRP1*	ENSP00000243077	947
EGFR*	ENSP00000275493	TNF	ENSP00000229681	904
APP*	ENSP00000284981	TGFB1	ENSP00000221930	986
TBXAS1	ENSP00000338087	PTGS2	ENSP00000186982	971
HIF1A*	ENSP00000338018	PTGS2	ENSP00000186982	900
HSPG2*	ENSP00000270945	APOB	ENSP00000233242	941
IL1A	ENSP00000263339	TNFSF11*	ENSP00000239849	919
MAPK3*	ENSP00000263025	EGR1	ENSP00000239938	971
GCLM	ENSP00000263891	ENSP00000239123*	ENSP00000239123	900
ENSP00000337459*	ENSP00000337459	PTGS2	ENSP00000186982	914
FGFR2	ENSP00000350166	FGF20*	ENSP00000180166	978
TIMP4*	ENSP00000287814	MMP2	ENSP00000219070	999
CSF2	ENSP00000296871	JAK2*	ENSP00000212292	921
IRS1	ENSP00000304895	ESR1	ENSP00000206249	903
ITGB6*	ENSP00000283249	TGFB1	ENSP00000221930	907
CD44*	ENSP00000278385	ICAM2	ENSP00000225760	908
S100G*	ENSP00000304641	ESR1	ENSP00000206249	917
TRPC1*	ENSP00000273482	TNF	ENSP00000229681	900

Symbol	StringID	Symbol	StringID	CS
TGFBR2*	ENSP00000295754	TGFBR3	ENSP00000212355	972
INS	ENSP00000250971	TXNL5*	ENSP00000250101	926
INS	ENSP00000250971	MYOD1*	ENSP00000250003	905
IL6	ENSP00000258743	CNTFR*	ENSP00000242338	922
SYT1*	ENSP00000261205	EGR1	ENSP00000239938	905
USF1	ENSP00000289790	HMOX1	ENSP00000216117	900
TOPBP1*	ENSP00000260810	EGR1	ENSP00000239938	900
JUNB*	ENSP00000303315	ESR1	ENSP00000206249	937
GPX3	ENSP00000288332	ENSP00000216951*	ENSP00000216951	929
LCAT	ENSP00000264005	APOA1	ENSP00000236850	995
IFI44*	ENSP00000260529	EGR1	ENSP00000239938	900
S100A8*	ENSP00000271846	TNF	ENSP00000229681	929
IGF1	ENSP00000302665	ESR1	ENSP00000206249	920
IKBKE*	ENSP00000271742	TNF	ENSP00000229681	913
AGT	ENSP00000258224	PLG*	ENSP00000241669	903
PTPRC*	ENSP00000271610	TNF	ENSP00000229681	914
NR0B1*	ENSP00000302390	ESR1	ENSP00000206249	963
IPF1*	ENSP00000266950	GCG	ENSP00000233604	904
HPD*	ENSP00000289004	MIF	ENSP00000215754	904
TP53*	ENSP00000269305	NR3C1	ENSP00000231509	989
PTHR1	ENSP00000324788	SLC9A3R2*	ENSP00000191922	914
MSN*	ENSP00000275995	ICAM2	ENSP00000225760	967
CYP2U1*	ENSP00000333212	PTGS2	ENSP00000186982	900
INS	ENSP00000250971	GFER*	ENSP00000248114	908
BCL10*	ENSP00000271015	TNF	ENSP00000229681	918
LPL	ENSP00000309757	CETP	ENSP00000200676	942
APP*	ENSP00000284981	F9	ENSP00000218099	912
GAB1*	ENSP00000262995	MPL	ENSP00000236056	928
ATP5B*	ENSP00000262030	APOA1	ENSP00000236850	906
IL6	ENSP00000258743	TNFSF11*	ENSP00000239849	928
NCOA2*	ENSP00000267974	NR3C1	ENSP00000231509	992
MMP26*	ENSP00000300762	ESR1	ENSP00000206249	900
PPARBP*	ENSP00000300651	ESR1	ENSP00000206249	931

Symbol	StringID	Symbol	StringID	CS
SCARB1	ENSP00000261693	APOA1	ENSP00000236850	986
AGT	ENSP00000258224	EGR1	ENSP00000239938	927
MTTP	ENSP00000265517	APOB	ENSP00000233242	996
TNFRSF11A*	ENSP00000269485	TNF	ENSP00000229681	931
TP53*	ENSP00000269305	TNF	ENSP00000229681	921
FBLN5	ENSP00000267620	LOX*	ENSP00000231004	902
AGT	ENSP00000258224	DUSP1*	ENSP00000239223	906
INS	ENSP00000250971	NKX2-2*	ENSP00000246017	900
STAT3	ENSP00000264657	EIF2AK2*	ENSP00000233057	968
STAT3	ENSP00000264657	CISH*	ENSP00000232856	982
GNB1*	ENSP00000263750	GCG	ENSP00000233604	900
IL1A	ENSP00000263339	IL18R1*	ENSP00000233957	923
IL1A	ENSP00000263339	IL1R1*	ENSP00000233946	999
NGFB*	ENSP00000256655	EGR1	ENSP00000239938	903
LCAT	ENSP00000264005	APOB	ENSP00000233242	903
FGF7*	ENSP00000267843	TNF	ENSP00000229681	900
APOBEC3G*	ENSP00000263247	APOB	ENSP00000233242	900
APOE	ENSP00000252486	LRP1*	ENSP00000243077	971
NCOA2*	ENSP00000267974	VDR	ENSP00000229022	970
AGT	ENSP00000258224	SPP1*	ENSP00000237623	911
ENSP00000264613*	ENSP00000264613	LTF*	ENSP00000231751	968
IL6	ENSP00000258743	CREB1*	ENSP00000236996	912
INS	ENSP00000250971	LIPE*	ENSP00000244289	900
GLP2R*	ENSP00000262441	GCG	ENSP00000233604	944
ICAM1	ENSP00000264832	IL5*	ENSP00000231454	904
ICAM1	ENSP00000264832	IL4*	ENSP00000231449	909
AGT	ENSP00000258224	CTGF*	ENSP00000237313	905
STAT3	ENSP00000264657	NR3C1	ENSP00000231509	952
F7	ENSP00000261967	GGCX*	ENSP00000233838	975
STAT3	ENSP00000264657	IL4*	ENSP00000231449	914
TNFRSF7*	ENSP00000266557	TNF	ENSP00000229681	932
INS	ENSP00000250971	PI3*	ENSP00000243924	900
NOS2A	ENSP00000327251	PTGS2	ENSP00000186982	917

Symbol	StringID	Symbol	StringID	CS
EGFR*	ENSP00000275493	TGFB1	ENSP00000221930	903
CHUK*	ENSP00000266054	TNF	ENSP00000229681	925
STAT3	ENSP00000264657	GHR*	ENSP00000230882	923
CPE*	ENSP00000261510	GCG	ENSP00000233604	951
F7	ENSP00000261967	TFPI	ENSP00000233156	997
STAT3	ENSP00000264657	ISL1*	ENSP00000230658	955
GAL*	ENSP00000265643	TNF	ENSP00000229681	925
IL1A	ENSP00000263339	IL5*	ENSP00000231454	911
IL1A	ENSP00000263339	IL4*	ENSP00000231449	915
CD40	ENSP00000279061	ENSP00000218368*	ENSP00000218368	987
HP	ENSP00000276297	RHOV*	ENSP00000220507	900
TFRC*	ENSP00000265238	TNF	ENSP00000229681	900
THBS1	ENSP00000260356	IGFBP5*	ENSP00000233813	986
INS	ENSP00000250971	NEUROG3*	ENSP00000242462	900
TLR2	ENSP00000260010	IL1R1*	ENSP00000233946	918
ICAM1	ENSP00000264832	TNF	ENSP00000229681	913
STAT3	ENSP00000264657	TNF	ENSP00000229681	920
INS	ENSP00000250971	NPY*	ENSP00000242152	900
IL11*	ENSP00000264563	TNF	ENSP00000229681	928
KL	ENSP00000255481	FGF23*	ENSP00000237837	900
ENSP00000272190*	ENSP00000272190	SERPINE1	ENSP00000223095	900
THBS1	ENSP00000260356	TFPI	ENSP00000233156	942
CD80*	ENSP00000264246	TNF	ENSP00000229681	920
ICAM1	ENSP00000264832	IFNG*	ENSP00000229135	912
NRD1*	ENSP00000262680	HBEGF	ENSP00000230990	918
PLA2G4A*	ENSP00000264143	TNF	ENSP00000229681	919
ATF2*	ENSP00000264110	TNF	ENSP00000229681	915
GDF15*	ENSP00000252809	EGR1	ENSP00000239938	900
RHOBTB2*	ENSP00000251822	KALRN	ENSP00000240874	900
ELAVL1*	ENSP00000264073	TNF	ENSP00000229681	910
INS	ENSP00000250971	MYOG*	ENSP00000241651	900
STAT3	ENSP00000264657	IFNG*	ENSP00000229135	918
TNFRSF8*	ENSP00000263932	TNF	ENSP00000229681	909

Symbol	StringID	Symbol	StringID	CS
LDLR	ENSP00000252444	EGR1	ENSP00000239938	900
GCLM	ENSP00000263891	GCLC*	ENSP00000229416	999
IL6	ENSP00000258743	IL1R1*	ENSP00000233946	920
LCAT	ENSP00000264005	CHPT1*	ENSP00000229266	900
IKBKG*	ENSP00000263518	TNF	ENSP00000229681	932
BIRC3*	ENSP00000263464	TNF	ENSP00000229681	912
STAT5B*	ENSP00000293328	ESR1	ENSP00000206249	917
ICAM1	ENSP00000264832	CD69*	ENSP00000228434	900
IL1B*	ENSP00000263341	TNF	ENSP00000229681	940
IL1A	ENSP00000263339	TNF	ENSP00000229681	993
STAT3	ENSP00000264657	IL23A*	ENSP00000228534	909
ICAM1	ENSP00000264832	KITLG*	ENSP00000228280	900
MAPK3*	ENSP00000263025	TNF	ENSP00000229681	981
THBS1	ENSP00000260356	ENSP00000232003*	ENSP00000232003	969
INS	ENSP00000250971	IAPP*	ENSP00000240652	900
CD44*	ENSP00000278385	MMP9	ENSP00000216953	985
IL1A	ENSP00000263339	IFNG*	ENSP00000229135	923
STAT3	ENSP00000264657	IL10RA*	ENSP00000227752	904
CD274*	ENSP00000262354	TNF	ENSP00000229681	926
SELP	ENSP00000263686	SELPLG*	ENSP00000228463	993
NCOA3*	ENSP00000262979	VDR	ENSP00000229022	935
INS	ENSP00000250971	EGR1	ENSP00000239938	900
SMAD7*	ENSP00000262158	TNF	ENSP00000229681	904
STAT3	ENSP00000264657	CCND1*	ENSP00000227507	967
LCN2*	ENSP00000277480	MMP9	ENSP00000216953	990
CD83*	ENSP00000262078	TNF	ENSP00000229681	928
TLR2	ENSP00000260010	IL4*	ENSP00000231449	916
ENSP00000257549*	ENSP00000257549	GCG	ENSP00000233604	900
HRMT1L1*	ENSP00000291705	ESR1	ENSP00000206249	944
ITGA8*	ENSP00000265937	VTN	ENSP00000226218	970
THBS1	ENSP00000260356	SPARC*	ENSP00000231061	919
ADAM10*	ENSP00000260408	HBEGF	ENSP00000230990	943
SLC2A1	ENSP00000270929	TGFB1	ENSP00000221930	902

Symbol	StringID	Symbol	StringID	CS
TFF1*	ENSP00000291527	ESR1	ENSP00000206249	912
JAG1	ENSP00000254958	MFAP2*	ENSP00000235772	902
TNFRSF13B*	ENSP00000261652	TNF	ENSP00000229681	927
LPA	ENSP00000321334	PTGS2	ENSP00000186982	900
TP53*	ENSP00000269305	SERPINE1	ENSP00000223095	904
GSTT1	ENSP00000248935	GSTM2*	ENSP00000241337	901
ICAM1	ENSP00000264832	IL2*	ENSP00000226730	914
INS	ENSP00000250971	DUSP1*	ENSP00000239223	900
STAT3	ENSP00000264657	IL2*	ENSP00000226730	913
IRAK3*	ENSP00000261233	TNF	ENSP00000229681	908
RAC2*	ENSP00000249071	KALRN	ENSP00000240874	900
SYT1*	ENSP00000261205	TNF	ENSP00000229681	911
SNW1*	ENSP00000261531	VDR	ENSP00000229022	926
IL6	ENSP00000258743	IL5*	ENSP00000231454	945
IL6	ENSP00000258743	IL4*	ENSP00000231449	950
IL6	ENSP00000258743	IL12B*	ENSP00000231228	925
ICAM1	ENSP00000264832	CCL2*	ENSP00000225831	900
LDLR	ENSP00000252444	APOA1	ENSP00000236850	905
CASP1*	ENSP00000260309	TNF	ENSP00000229681	911
USF1	ENSP00000289790	ESR1	ENSP00000206249	968
TUBB5*	ENSP00000264071	VTN	ENSP00000226218	900
TLR2	ENSP00000260010	TNF	ENSP00000229681	930
IL1A	ENSP00000263339	IL2*	ENSP00000226730	923
STAT3	ENSP00000264657	CSF3*	ENSP00000225474	916
RIPK1*	ENSP00000259808	TNF	ENSP00000229681	992
GTF2B*	ENSP00000260511	VDR	ENSP00000229022	967
EPO	ENSP00000252723	MPL	ENSP00000236056	900
INS	ENSP00000250971	GHRH*	ENSP00000237527	900
TLR2	ENSP00000260010	IFNG*	ENSP00000229135	921
IL1A	ENSP00000263339	VTN	ENSP00000226218	900
IL1RN*	ENSP00000259206	TNF	ENSP00000229681	924
IL10*	ENSP00000259152	TNF	ENSP00000229681	962
FURIN*	ENSP00000268171	TGFB1	ENSP00000221930	958

Symbol	StringID	Symbol	StringID	CS
TANK*	ENSP00000259075	TNF	ENSP00000229681	931
INS	ENSP00000250971	CREB1*	ENSP00000236996	900
IL1A	ENSP00000263339	CCL2*	ENSP00000225831	902
LRP6	ENSP00000261349	CCND1*	ENSP00000227507	907
IL6	ENSP00000258743	TNF	ENSP00000229681	964
TLR2	ENSP00000260010	IL23A*	ENSP00000228534	905
TBXA2R	ENSP00000248419	GNA13*	ENSP00000239138	944
VEGFA	ENSP00000317598	PTGS2	ENSP00000186982	916
ENSP00000272190*	ENSP00000272190	RENB	ENSP00000218151	970
IL1A	ENSP00000263339	CSF3*	ENSP00000225474	916
ITGA2B	ENSP00000262407	VTN	ENSP00000226218	979
EDAR*	ENSP00000258443	TNF	ENSP00000229681	933
SDC1*	ENSP00000254351	APOB	ENSP00000233242	933
IL6	ENSP00000258743	IFNG*	ENSP00000229135	952
TEC*	ENSP00000258070	TNF	ENSP00000229681	900
ITGB3	ENSP00000262017	VTN	ENSP00000226218	997
ALOX15B*	ENSP00000316970	PTGS2	ENSP00000186982	906
ACVRL1*	ENSP00000267008	TGFB1	ENSP00000221930	995
VWF*	ENSP00000261405	VTN	ENSP00000226218	900
IL6	ENSP00000258743	IL23A*	ENSP00000228534	924
FGFR2	ENSP00000350166	FGF4*	ENSP00000168712	999
IL6	ENSP00000258743	KITLG*	ENSP00000228280	928
ITGAV*	ENSP00000261023	VTN	ENSP00000226218	997
AGTR1	ENSP00000273430	MAPK1*	ENSP00000215832	930
TP53*	ENSP00000269305	MMP2	ENSP00000219070	900
LDLR	ENSP00000252444	SNX17*	ENSP00000233575	908
TLR2	ENSP00000260010	IL2*	ENSP00000226730	924
ALOX12B*	ENSP00000315167	PTGS2	ENSP00000186982	903
APOC4*	ENSP00000252489	APOB	ENSP00000233242	990
APOE	ENSP00000252486	APOB	ENSP00000233242	990
LDLR	ENSP00000252444	APOB	ENSP00000233242	996
ENSP00000265171*	ENSP00000265171	TGFB1	ENSP00000221930	916
EPAS1*	ENSP00000263734	SERPINE1	ENSP00000223095	900

Symbol	StringID	Symbol	StringID	CS
STAT3	ENSP00000264657	JAK3*	ENSP00000222246	997
JUN*	ENSP00000314522	PTGS2	ENSP00000186982	906
INS	ENSP00000250971	PLEK*	ENSP00000234313	900
LRP6	ENSP00000261349	DKK1*	ENSP00000224974	999
ICAM1	ENSP00000264832	TGFB1	ENSP00000221930	900
IL1A	ENSP00000263339	SERPINE1	ENSP00000223095	900
AGT	ENSP00000258224	CCND1*	ENSP00000227507	900
CDKN1A*	ENSP00000244741	EGR1	ENSP00000239938	910
FGFB*	ENSP00000264498	TGFB1	ENSP00000221930	910
INS	ENSP00000250971	IGFBP2*	ENSP00000233809	900
IL6	ENSP00000258743	IL2*	ENSP00000226730	955
INS	ENSP00000250971	ENSP00000233668*	ENSP00000233668	912
INS	ENSP00000250971	GCG	ENSP00000233604	900
IL6	ENSP00000258743	NFKB1*	ENSP00000226574	977
PPARA	ENSP00000262735	SERPINE1	ENSP00000223095	900
ATBF1*	ENSP00000268489	F9	ENSP00000218099	900
PLCG1*	ENSP00000244007	EGR1	ENSP00000239938	924
INS	ENSP00000250971	APOB	ENSP00000233242	900
FURIN*	ENSP00000268171	F9	ENSP00000218099	914
HEXA*	ENSP00000268097	RENB	ENSP00000218151	900
IL1A	ENSP00000263339	TGFB1	ENSP00000221930	906
INS	ENSP00000250971	CISH*	ENSP00000232856	900
IL6	ENSP00000258743	CCL2*	ENSP00000225831	912
JAG1	ENSP00000254958	IFNG*	ENSP00000229135	903
IL6	ENSP00000258743	CSF3*	ENSP00000225474	926
AGT	ENSP00000258224	CCL2*	ENSP00000225831	902
G6PC*	ENSP00000253801	TNF	ENSP00000229681	900
TIMP3*	ENSP00000266085	MMP2	ENSP00000219070	999
TGFBR1*	ENSP00000262458	TGFB1	ENSP00000221930	999
MTMR6*	ENSP00000266939	RENB	ENSP00000218151	900
INDO*	ENSP00000253513	TNF	ENSP00000229681	910
SLC9A1	ENSP00000263980	RHOV*	ENSP00000220507	969
EDA2R*	ENSP00000253392	TNF	ENSP00000229681	918

Symbol	StringID	Symbol	StringID	CS
SMAD7*	ENSP00000262158	TGFB1	ENSP00000221930	991
APOA2*	ENSP00000289906	CETP	ENSP00000200676	900
CYP4A11*	ENSP00000311095	PTGS2	ENSP00000186982	913
INS	ENSP00000250971	LNPEP*	ENSP00000231368	900
GNG11*	ENSP00000248564	GCG	ENSP00000233604	900
AGTR1	ENSP00000273430	JAK2*	ENSP00000212292	990
BARX2*	ENSP00000281437	ESR1	ENSP00000206249	900
MMRN1*	ENSP00000264790	MMP2	ENSP00000219070	926
PZP*	ENSP00000261336	TGFB1	ENSP00000221930	942
APOE	ENSP00000252486	TNF	ENSP00000229681	930
LDLR	ENSP00000252444	TNF	ENSP00000229681	903
STAT3	ENSP00000264657	MMP2	ENSP00000219070	902
GNG13*	ENSP00000248150	GCG	ENSP00000233604	900
INS	ENSP00000250971	GHR*	ENSP00000230882	911
FGFB*	ENSP00000264498	MMP2	ENSP00000219070	902
IFI44*	ENSP00000260529	HGF	ENSP00000222390	900
GTF3A*	ENSP00000241462	EGR1	ENSP00000239938	900
ITGAV*	ENSP00000261023	TGFB1	ENSP00000221930	957
SSB*	ENSP00000260956	TGFB1	ENSP00000221930	900
ENSP00000265171*	ENSP00000265171	TIMP1	ENSP00000218388	905
LCAT	ENSP00000264005	LYPLA3*	ENSP00000219345	906
INS	ENSP00000250971	ISL1*	ENSP00000230658	900
FOXO1A*	ENSP00000280496	ESR1	ENSP00000206249	911
MMRN1*	ENSP00000264790	TIMP1	ENSP00000218388	917
THBS1	ENSP00000260356	TGFB1	ENSP00000221930	968
STAT3	ENSP00000264657	GATA1*	ENSP00000218266	960
F11	ENSP00000264691	F9	ENSP00000218099	984
TIMP3*	ENSP00000266085	MMP9	ENSP00000216953	985
IL6	ENSP00000258743	SERPINE1	ENSP00000223095	906
CANX*	ENSP00000247461	APOB	ENSP00000233242	946
LRP6	ENSP00000261349	DKK4*	ENSP00000220812	938
EPO	ENSP00000252723	KITLG*	ENSP00000228280	907
IL1A	ENSP00000263339	MMP2	ENSP00000219070	900

Symbol	StringID	Symbol	StringID	CS
STAT1*	ENSP00000354394	TNFRSF1A	ENSP00000162749	985
INS	ENSP00000250971	TNF	ENSP00000229681	900
F10	ENSP00000246496	GGCX*	ENSP00000233838	990
YWHAH*	ENSP00000248975	NR3C1	ENSP00000231509	964
ENPP1	ENSP00000350964	PYGM*	ENSP00000164139	900
MYC*	ENSP00000259523	TGFB1	ENSP00000221930	900
TIMP2*	ENSP00000262768	MMP2	ENSP00000219070	999
BCL2*	ENSP00000353498	TNFRSF1A	ENSP00000162749	915
MAPK8*	ENSP00000353483	TNFRSF1A	ENSP00000162749	990
IL6	ENSP00000258743	HAMP*	ENSP00000222304	901
IL10*	ENSP00000259152	TGFB1	ENSP00000221930	912
IL1A	ENSP00000263339	TIMP1	ENSP00000218388	900
KALRN	ENSP00000240874	RHOQ*	ENSP00000238738	900
HPX*	ENSP00000265983	HMOX1	ENSP00000216117	904
F10	ENSP00000246496	TFPI	ENSP00000233156	998
FOXA2*	ENSP00000245994	GCG	ENSP00000233604	900
ICAM1	ENSP00000264832	MMP9	ENSP00000216953	900
ENSP00000278568*	ENSP00000278568	ESR1	ENSP00000206249	967
MMRN1*	ENSP00000264790	MMP9	ENSP00000216953	900
CD68*	ENSP00000250092	TNF	ENSP00000229681	915
IL6	ENSP00000258743	CD79A*	ENSP00000221972	926
IL6	ENSP00000258743	TGFB1	ENSP00000221930	991
TRAP3*	ENSP00000352685	TNFRSF1A	ENSP00000162749	999
TLR2	ENSP00000260010	RIPK2*	ENSP00000220751	923
BLVRA*	ENSP00000265523	HMOX1	ENSP00000216117	975
FGFB*	ENSP00000264498	MMP9	ENSP00000216953	905
AREG*	ENSP00000264487	MMP9	ENSP00000216953	916
POR*	ENSP00000265302	HMOX1	ENSP00000216117	906
IL8*	ENSP00000306512	PTGS2	ENSP00000186982	900
AGT	ENSP00000258224	TGFB1	ENSP00000221930	917
FOS*	ENSP00000306245	PTGS2	ENSP00000186982	905
GCLM	ENSP00000263891	ENSP00000216951*	ENSP00000216951	966
ENPP1	ENSP00000350964	COASY*	ENSP00000163059	900

Symbol	StringID	Symbol	StringID	CS
F12	ENSP00000253496	C1QBP*	ENSP00000225698	900
LIF*	ENSP00000249075	TNF	ENSP00000229681	930
AGT	ENSP00000258224	FCGRT*	ENSP00000221466	900
CASP8*	ENSP00000351273	TNFRSF1A	ENSP00000162749	995
THBD	ENSP00000315029	CPB2	ENSP00000181383	905
F7	ENSP00000261967	F9	ENSP00000218099	971
IL1A	ENSP00000263339	MMP9	ENSP00000216953	900
STAT3	ENSP00000264657	MAPK1*	ENSP00000215832	999
CEBPB*	ENSP00000305422	PTGS2	ENSP00000186982	919
STAT3	ENSP00000264657	OSM*	ENSP00000215781	915
FGL2*	ENSP00000248598	TNF	ENSP00000229681	903
IL1A	ENSP00000263339	NFKBIA*	ENSP00000216797	908
MAPK3*	ENSP00000263025	MMP9	ENSP00000216953	900
THBS1	ENSP00000260356	MMP2	ENSP00000219070	968
HEXB*	ENSP00000261416	RENBP	ENSP00000218151	900
IL13*	ENSP00000304915	PTGS2	ENSP00000186982	914
VWF*	ENSP00000261405	F9	ENSP00000218099	933
CYP2J2	ENSP00000257149	CYP4F2*	ENSP00000221700	948
TIMP2*	ENSP00000262768	MMP9	ENSP00000216953	915
CYBA	ENSP00000261623	NOX1*	ENSP00000217884	998
GNGT1*	ENSP00000248572	GNB3	ENSP00000229264	912
GNG11*	ENSP00000248564	GNB3	ENSP00000229264	971
PPARA	ENSP00000262735	PCK2*	ENSP00000216780	909
BLVRB*	ENSP00000263368	HMOX1	ENSP00000216117	972
TFAP2A*	ENSP00000259733	MMP2	ENSP00000219070	900
GNG13*	ENSP00000248150	GNB3	ENSP00000229264	996
NOS2A	ENSP00000327251	KLF6*	ENSP00000173785	900
EGR1	ENSP00000239938	CREB1*	ENSP00000236996	909
THBS1	ENSP00000260356	TIMP1	ENSP00000218388	900
EGFR*	ENSP00000275493	ESR1	ENSP00000206249	971
PRI*	ENSP00000348515	TNFRSF1A	ENSP00000162749	900
IL6	ENSP00000258743	MMP2	ENSP00000219070	900
KALRN	ENSP00000240874	RHOU*	ENSP00000235211	900

Symbol	StringID	Symbol	StringID	CS
CCR7*	ENSP00000246657	TNF	ENSP00000229681	910
PTGER4*	ENSP00000302846	PTGS2	ENSP00000186982	907
INHBE*	ENSP00000266646	TGFBR3	ENSP00000212355	900
INS	ENSP00000250971	RPS6KB1*	ENSP00000225577	900
IL10*	ENSP00000259152	TIMP1	ENSP00000218388	907
PIK3R1*	ENSP00000274335	ESR1	ENSP00000206249	967
BCL2L1*	ENSP00000302564	PTGS2	ENSP00000186982	902
COPS5*	ENSP00000262212	MIF	ENSP00000215754	994
BMP2*	ENSP00000246044	TNF	ENSP00000229681	918
IL6	ENSP00000258743	TIMP1	ENSP00000218388	913
THBS1	ENSP00000260356	MMP9	ENSP00000216953	989
AGT	ENSP00000258224	KLF5*	ENSP00000218736	910
BIRC4*	ENSP00000245836	TNF	ENSP00000229681	909
TLR4	ENSP00000346893	TNFRSF1A	ENSP00000162749	923
AGT	ENSP00000258224	TIMP1	ENSP00000218388	913
PLG*	ENSP00000241669	APOB	ENSP00000233242	900
IRF1*	ENSP00000245414	TNF	ENSP00000229681	922
PLG*	ENSP00000241669	TFPI	ENSP00000233156	904
BMP2*	ENSP00000246044	MGP	ENSP00000228938	972
THBS1	ENSP00000260356	CTSG*	ENSP00000216336	967
STAT3	ENSP00000264657	JAK2*	ENSP00000212292	998
INS	ENSP00000250971	RLN1*	ENSP00000223862	900
CALM1*	ENSP00000272298	ESR1	ENSP00000206249	947
EPO	ENSP00000252723	EPOR*	ENSP00000222139	999
TTR*	ENSP00000237014	APOA1	ENSP00000236850	946
IL6	ENSP00000258743	MMP9	ENSP00000216953	910
PSEN2*	ENSP00000272148	ESR1	ENSP00000206249	907
STAT6*	ENSP00000300134	PTGS2	ENSP00000186982	902
IL6	ENSP00000258743	NFKBIA*	ENSP00000216797	916
ABCA1	ENSP00000297693	NR1H4*	ENSP00000188403	907
TGFB2	ENSP00000264103	TGFBR3	ENSP00000212355	999
AGT	ENSP00000258224	AVP*	ENSP00000217172	915
INS	ENSP00000250971	ENSP00000223366*	ENSP00000223366	967

Symbol	StringID	Symbol	StringID	CS
LDLR	ENSP00000252444	TGFB1	ENSP00000221930	904
PI3*	ENSP00000243924	TNF	ENSP00000229681	900
IL10*	ENSP00000259152	HMOX1	ENSP00000216117	922
INS	ENSP00000250971	SERPINE1	ENSP00000223095	900
IL6	ENSP00000258743	HMOX1	ENSP00000216117	917
HDAC1*	ENSP00000271095	ESR1	ENSP00000206249	903
TNFAIP6*	ENSP00000243347	TNF	ENSP00000229681	933
BRE*	ENSP00000343412	TNFRSF1A	ENSP00000162749	911
AGT	ENSP00000258224	CTSC*	ENSP00000216336	921
IL6	ENSP00000258743	OSM*	ENSP00000215781	983
AGT	ENSP00000258224	HMOX1	ENSP00000216117	919
TGFBR1*	ENSP00000262458	TGFBR3	ENSP00000212355	977
AKR1C2*	ENSP00000307205	CPB2	ENSP00000181383	900
INS	ENSP00000250971	CD79A*	ENSP00000221972	900
PLAU*	ENSP00000242464	TNF	ENSP00000229681	912
NOS3	ENSP00000297494	PTGS2	ENSP00000186982	916
ERBB2*	ENSP00000269571	ESR1	ENSP00000206249	971
INS	ENSP00000250971	RETN*	ENSP00000221515	900
TP53*	ENSP00000269305	ESR1	ENSP00000206249	971
TRADD*	ENSP00000341268	TNFRSF1A	ENSP00000162749	999
GSTT1	ENSP00000248935	CYP3A5*	ENSP00000222982	910
GHRH*	ENSP00000237527	GCG	ENSP00000233604	906
CXCR4*	ENSP00000241393	TNF	ENSP00000229681	910
NCOR1*	ENSP00000268712	ESR1	ENSP00000206249	970
CYP1A1	ENSP00000268062	ESR1	ENSP00000206249	905
IGF1R*	ENSP00000268035	ESR1	ENSP00000206249	920
NCOA2*	ENSP00000267974	ESR1	ENSP00000206249	996
FGF7*	ENSP00000267843	ESR1	ENSP00000206249	900
TGFA*	ENSP00000295400	PTGS2	ENSP00000186982	915
JUND*	ENSP00000252818	TIMP1	ENSP00000218388	908
PTGDS2*	ENSP00000295256	PTGS2	ENSP00000186982	919
IKBKB*	ENSP00000339151	TNFRSF1A	ENSP00000162749	992
EGR1	ENSP00000239938	PTP4A1*	ENSP00000229983	953

Symbol	StringID	Symbol	StringID	CS
EPO	ENSP00000252723	GATA1*	ENSP00000218266	900
EGR1	ENSP00000239938	TNF	ENSP00000229681	925
JAG1	ENSP00000254958	MFNG*	ENSP00000215864	910
CYP4A22*	ENSP00000294337	PTGS2	ENSP00000186982	900
TDG*	ENSP00000266775	ESR1	ENSP00000206249	942
DUSP1*	ENSP00000239223	TNF	ENSP00000229681	911
IL6	ENSP00000258743	JAK2*	ENSP00000212292	919
ALOX15*	ENSP00000293761	PTGS2	ENSP00000186982	929
CHUK*	ENSP00000266054	ESR1	ENSP00000206249	934
CREB1*	ENSP00000236996	NR3C1	ENSP00000231509	958
PLAU*	ENSP00000242464	VTN	ENSP00000226218	900
TRAF5*	ENSP00000336825	TNFRSF1A	ENSP00000162749	907
APOE	ENSP00000252486	PLTP*	ENSP00000216947	927
DBH	ENSP00000263611	COMT*	ENSP00000207636	980
PTGIS	ENSP00000244043	PTGDS*	ENSP00000224167	900
PTGER1*	ENSP00000292513	PTGS2	ENSP00000186982	900
PLG*	ENSP00000241669	VTN	ENSP00000226218	900
PPARGC1A*	ENSP00000264867	ESR1	ENSP00000206249	969
PROC*	ENSP00000234071	TFPI	ENSP00000233156	900
CD58*	ENSP00000237538	TNF	ENSP00000229681	900
LDLR	ENSP00000252444	OSM*	ENSP00000215781	900
INS	ENSP00000250971	MMP9	ENSP00000216953	900
CREB1*	ENSP00000236996	TNF	ENSP00000229681	911
INS	ENSP00000250971	PCK2*	ENSP00000216780	900
EGR1	ENSP00000239938	IL2*	ENSP00000226730	924
IGF2	ENSP00000348986	KCNQ1*	ENSP00000155840	919
MPL	ENSP00000236056	CCND3*	ENSP00000230338	900
GCG	ENSP00000233604	GNB4*	ENSP00000232564	900
CDKN1A*	ENSP00000244741	TGFB1	ENSP00000221930	905
EP300*	ENSP00000263253	ESR1	ENSP00000206249	999
MAPK3*	ENSP00000263025	ESR1	ENSP00000206249	991
NCOA3*	ENSP00000262979	ESR1	ENSP00000206249	981
LTB*	ENSP00000244390	TGFB1	ENSP00000221930	914

Symbol	StringID	Symbol	StringID	CS
NCF2	ENSP00000340837	NOX3*	ENSP00000159060	942
CREBBP*	ENSP00000262367	ESR1	ENSP00000206249	974
SELL	ENSP00000236147	IFNG*	ENSP00000229135	908
TRAF3*	ENSP00000332468	TNFRSF1A	ENSP00000162749	918
PLAU*	ENSP00000242464	SERPINE1	ENSP00000223095	999
COPS5*	ENSP00000262212	ESR1	ENSP00000206249	956
PHPT1*	ENSP00000247665	RENBP	ENSP00000218151	900
CCNT1*	ENSP00000261900	ESR1	ENSP00000206249	942
NRK*	ENSP00000243300	TGFB1	ENSP00000221930	908
APOA1	ENSP00000236850	ENSP00000227667*	ENSP00000227667	914
PLG*	ENSP00000241669	SERPINE1	ENSP00000223095	996
PRTN3*	ENSP00000234347	TNF	ENSP00000229681	967
PLAU*	ENSP00000242464	TGFB1	ENSP00000221930	906
F10	ENSP00000246496	F9	ENSP00000218099	982
CYP1B1*	ENSP00000260630	ESR1	ENSP00000206249	904
SPP1*	ENSP00000237623	VTN	ENSP00000226218	922
CASP9*	ENSP00000330237	TNFRSF1A	ENSP00000162749	910
IL1R1*	ENSP00000233946	TNF	ENSP00000229681	924
CYP19A1	ENSP00000260433	ESR1	ENSP00000206249	923
GCG	ENSP00000233604	GLP1R*	ENSP00000229900	971
EPO	ENSP00000252723	JAK2*	ENSP00000212292	916
GCG	ENSP00000233604	GNB3	ENSP00000229264	900
EIF2AK2*	ENSP00000233057	TNF	ENSP00000229681	907
APOB	ENSP00000233242	APOBEC1*	ENSP00000229304	906
CYP2C8*	ENSP00000285985	PTGS2	ENSP00000186982	900
CYP2C19*	ENSP00000285981	PTGS2	ENSP00000186982	900
CYP2C18*	ENSP00000285979	PTGS2	ENSP00000186982	912
NAGK*	ENSP00000244204	RENBP	ENSP00000218151	933
NOS2A	ENSP00000327251	TNFRSF1A	ENSP00000162749	912
EGR1	ENSP00000239938	TGFB1	ENSP00000221930	906
MDM2*	ENSP00000258149	ESR1	ENSP00000206249	989
IL5*	ENSP00000231454	TNF	ENSP00000229681	945
IL4*	ENSP00000231449	TNF	ENSP00000229681	951

Symbol	StringID	Symbol	StringID	CS
PLAU*	ENSP00000242464	MMP2	ENSP00000219070	972
KALRN	ENSP00000240874	RHOV*	ENSP00000220507	900
IL12B*	ENSP00000231228	TNF	ENSP00000229681	929
APOB	ENSP00000233242	ENSP00000227667*	ENSP00000227667	902
RECK*	ENSP00000242287	MMP2	ENSP00000219070	981
IL6	ENSP00000258743	FLT3LG*	ENSP00000204637	919
CTGF*	ENSP00000237313	SERPINE1	ENSP00000223095	900
TBP*	ENSP00000230354	TNF	ENSP00000229681	916
GOT2*	ENSP00000245206	MIF	ENSP00000215754	900
IGFBP5*	ENSP00000233813	VTN	ENSP00000226218	988
CYP1A1	ENSP00000268062	GSTP1*	ENSP00000196968	925
GCG	ENSP00000233604	PPY*	ENSP00000225992	904
MAPK14*	ENSP00000229794	TNF	ENSP00000229681	986
CCND3*	ENSP00000230338	VDR	ENSP00000229022	942
PTH*	ENSP00000282091	PTGS2	ENSP00000186982	919
ITGA4*	ENSP00000233573	ICAM2	ENSP00000225760	900
IL15	ENSP00000296545	TBX21*	ENSP00000177694	902
CTGF*	ENSP00000237313	TGFB1	ENSP00000221930	968
TNF	ENSP00000229681	IFNG*	ENSP00000229135	987
PLAU*	ENSP00000242464	MMP9	ENSP00000216953	974
TNF	ENSP00000229681	LTBR*	ENSP00000228918	985
RECK*	ENSP00000242287	MMP9	ENSP00000216953	994
SREBF1	ENSP00000261646	CETP	ENSP00000200676	900
TNF	ENSP00000229681	IL23A*	ENSP00000228534	928
NR0B2*	ENSP00000254227	ESR1	ENSP00000206249	989
PLG*	ENSP00000241669	MMP9	ENSP00000216953	946
EGR1	ENSP00000239938	TIMP1	ENSP00000218388	900
VEGFC*	ENSP00000280193	PTGS2	ENSP00000186982	900
VDR	ENSP00000229022	CYP27B1*	ENSP00000228606	906
TNF	ENSP00000229681	BIRC2*	ENSP00000227758	913
SPARC*	ENSP00000231061	VTN	ENSP00000226218	900
TNF	ENSP00000229681	CCND1*	ENSP00000227507	900
PROC*	ENSP00000234071	SERPINE1	ENSP00000223095	957

Symbol	StringID	Symbol	StringID	CS
GYS1	ENSP00000317904	PYGM*	ENSP00000164139	957
CD40	ENSP00000279061	PTGS2	ENSP00000186982	900
GCG	ENSP00000233604	ENSP00000223366*	ENSP00000223366	900
IGFBP5*	ENSP00000233813	SERPINE1	ENSP00000223095	987
TRAF1*	ENSP00000320093	TNFRSF1A	ENSP00000162749	975
TNF	ENSP00000229681	IL2*	ENSP00000226730	960
SPP1*	ENSP00000237623	MMP2	ENSP00000219070	900
TNF	ENSP00000229681	NFKB1*	ENSP00000226574	982
TNFSF11*	ENSP00000239849	MMP9	ENSP00000216953	912
TNF	ENSP00000229681	CD38*	ENSP00000226279	904
NR3C1	ENSP00000231509	BAG1*	ENSP00000224112	982
TNF	ENSP00000229681	CCL13*	ENSP00000225844	915
TNF	ENSP00000229681	CCL2*	ENSP00000225831	917
MGP	ENSP00000228938	VTN	ENSP00000226218	900
TNF	ENSP00000229681	CSF3*	ENSP00000225474	925
EGR1	ENSP00000239938	MAPK1*	ENSP00000215832	970
EGR1	ENSP00000239938	OSM*	ENSP00000215781	904
INHA*	ENSP00000243786	TGFBR3	ENSP00000212355	959
TNF	ENSP00000229681	CCL3*	ENSP00000225245	911
EPO	ENSP00000252723	THPO	ENSP00000204615	900
ENSP00000276449*	ENSP00000276449	PTGS2	ENSP00000186982	908
ENSP00000239123*	ENSP00000239123	MIF	ENSP00000215754	900
TRAF6*	ENSP00000316840	TNFRSF1A	ENSP00000162749	985
MPL	ENSP00000236056	GATA1*	ENSP00000218266	923
EGFR*	ENSP00000275493	PTGS2	ENSP00000186982	907
PIAS1*	ENSP00000249636	ESR1	ENSP00000206249	949
AGT	ENSP00000258224	AQP2*	ENSP00000199280	905
APOA1	ENSP00000236850	PLTP*	ENSP00000216947	918
IL4*	ENSP00000231449	TGFB1	ENSP00000221930	913
VDR	ENSP00000229022	BAG1*	ENSP00000224112	944
VEGFA	ENSP00000317598	CEACAM1*	ENSP00000161559	900
SPARC*	ENSP00000231061	TGFB1	ENSP00000221930	951
TNF	ENSP00000229681	SERPINE1	ENSP00000223095	907

Symbol	StringID	Symbol	StringID	CS
JUN*	ENSP00000314522	TNFRSF1A	ENSP00000162749	919
IL2*	ENSP00000226730	ICAM2	ENSP00000225760	907
GGCX*	ENSP00000233838	F9	ENSP00000218099	990
TNF	ENSP00000229681	CD79A*	ENSP00000221972	931
TNF	ENSP00000229681	TGFB1	ENSP00000221930	921
CASP2*	ENSP00000312664	TNFRSF1A	ENSP00000162749	946
TNF	ENSP00000229681	RETN*	ENSP00000221515	903
TNF	ENSP00000229681	RELB*	ENSP00000221452	926
IFNG*	ENSP00000229135	TGFB1	ENSP00000221930	914
CFLAR*	ENSP00000312455	TNFRSF1A	ENSP00000162749	910
CDKN1B*	ENSP00000228872	TGFB1	ENSP00000221930	916
MCL1*	ENSP00000271648	PTGS2	ENSP00000186982	904
TNF	ENSP00000229681	TNFRSF10A*	ENSP00000221132	908
CITED1*	ENSP00000246139	ESR1	ENSP00000206249	957
RELA*	ENSP00000311508	TNFRSF1A	ENSP00000162749	922
TGFB3*	ENSP00000238682	TGFBR3	ENSP00000212355	945
APOE	ENSP00000252486	CETP	ENSP00000200676	905
NFE2L2*	ENSP00000234401	HMOX1	ENSP00000216117	918
GCG	ENSP00000233604	PCK2*	ENSP00000216780	900
GCG	ENSP00000233604	PABPN1*	ENSP00000216727	931
CASP3*	ENSP00000311032	TNFRSF1A	ENSP00000162749	963
ENSP00000310933*	ENSP00000310933	TNFRSF1A	ENSP00000162749	978
PSMD2*	ENSP00000310129	TNFRSF1A	ENSP00000162749	964
VTN	ENSP00000226218	SERPINE1	ENSP00000223095	999
TNF	ENSP00000229681	MEFV*	ENSP00000219596	900
ERBB2*	ENSP00000269571	PTGS2	ENSP00000186982	900
INS	ENSP00000250971	CETP	ENSP00000200676	900
TNF	ENSP00000229681	CCL17*	ENSP00000219244	911
TP53*	ENSP00000269305	PTGS2	ENSP00000186982	984
VTN	ENSP00000226218	ITGB8*	ENSP00000222573	954
IL2*	ENSP00000226730	TGFB1	ENSP00000221930	991
TNF	ENSP00000229681	MMP2	ENSP00000219070	906
LTA*	ENSP00000308936	TNFRSF1A	ENSP00000162749	999

Symbol	StringID	Symbol	StringID	CS
TNF	ENSP00000229681	TNFSF13B*	ENSP00000218706	930
VTN	ENSP00000226218	TGFB1	ENSP00000221930	983
TNF	ENSP00000229681	TIMP1	ENSP00000218388	916
MPL	ENSP00000236056	JAK2*	ENSP00000212292	989
VTN	ENSP00000226218	PLAUR*	ENSP00000221264	983
WDR48*	ENSP00000307491	TNFRSF1A	ENSP00000162749	900
TNF	ENSP00000229681	LBP*	ENSP00000217407	923
AHR*	ENSP00000242057	ESR1	ENSP00000206249	991
IL8*	ENSP00000306512	TNFRSF1A	ENSP00000162749	900
TNF	ENSP00000229681	MMP9	ENSP00000216953	915
TNF	ENSP00000229681	NFKBIA*	ENSP00000216797	919
TNF	ENSP00000229681	PCK2*	ENSP00000216780	903
ITIH4*	ENSP00000266041	PTGS2	ENSP00000186982	900
VDR	ENSP00000229022	CYP24A1*	ENSP00000216862	909
MAPK14*	ENSP00000229794	HMOX1	ENSP00000216117	953
TNF	ENSP00000229681	HMOX1	ENSP00000216117	920
ALOX5*	ENSP00000265455	PTGS2	ENSP00000186982	975
ENSP00000265171*	ENSP00000265171	PTGS2	ENSP00000186982	914
TNF	ENSP00000229681	MAPK1*	ENSP00000215832	981
SERPINE1	ENSP00000223095	TGFB1	ENSP00000221930	905
FASLG*	ENSP00000304123	TNFRSF1A	ENSP00000162749	927
CCL2*	ENSP00000225831	MMP2	ENSP00000219070	900
PLA2G4A*	ENSP00000264143	PTGS2	ENSP00000186982	972
ELAVL1*	ENSP00000264073	PTGS2	ENSP00000186982	900
SERPINE1	ENSP00000223095	PLAUR*	ENSP00000221264	991
CEACAM5*	ENSP00000221992	TGFB1	ENSP00000221930	900
SERPINE1	ENSP00000223095	PLAT*	ENSP00000220809	999
IL1A	ENSP00000263339	PTGS2	ENSP00000186982	903
NUCB1*	ENSP00000263273	PTGS2	ENSP00000186982	906
MAPK3*	ENSP00000263025	PTGS2	ENSP00000186982	902
FADD*	ENSP00000301838	TNFRSF1A	ENSP00000162749	999
YY1*	ENSP00000262238	PTGS2	ENSP00000186982	900
GSTT1	ENSP00000248935	GSTP1*	ENSP00000196968	974

Symbol	StringID	Symbol	StringID	CS
COL1A1*	ENSP00000225964	MMP9	ENSP00000216953	914
CCL2*	ENSP00000225831	MMP9	ENSP00000216953	900
UVO*	ENSP00000261769	PTGS2	ENSP00000186982	908
CYP2C9*	ENSP00000260682	PTGS2	ENSP00000186982	938
EGR1	ENSP00000239938	CHGB*	ENSP00000203005	900
PSMC3*	ENSP00000298852	TNFRSF1A	ENSP00000162749	900
TGFB1	ENSP00000221930	MMP2	ENSP00000219070	984
TLR2	ENSP00000260010	PTGS2	ENSP00000186982	912
CASP7*	ENSP00000298700	TNFRSF1A	ENSP00000162749	981
TGFB1	ENSP00000221930	TIMP1	ENSP00000218388	909
IL6	ENSP00000258743	PTGS2	ENSP00000186982	917
MPL	ENSP00000236056	THPO	ENSP00000204615	998
ARTS1*	ENSP00000296754	TNFRSF1A	ENSP00000162749	972
AGT	ENSP00000258224	PTGS2	ENSP00000186982	925
SCYE1*	ENSP00000296407	TNFRSF1A	ENSP00000162749	909
TGFB1	ENSP00000221930	MMP9	ENSP00000216953	909
SERPINE1	ENSP00000223095	OSM*	ENSP00000215781	900
CYP2J2	ENSP00000257149	PTGS2	ENSP00000186982	912
USF2*	ENSP00000222305	HMOX1	ENSP00000216117	902
VCAM1	ENSP00000294728	TNFRSF1A	ENSP00000162749	917
JAK1*	ENSP00000294423	TNFRSF1A	ENSP00000162749	945
PLAT*	ENSP00000220809	MMP9	ENSP00000216953	910
MMP2	ENSP00000219070	TIMP1	ENSP00000218388	996
TNFSF12*	ENSP00000293826	TNFRSF1A	ENSP00000162749	967
APOA1	ENSP00000236850	CETP	ENSP00000200676	985
TIMP1	ENSP00000218388	MMP9	ENSP00000216953	970
CYP2E1*	ENSP00000252945	PTGS2	ENSP00000186982	980
TGFB1	ENSP00000221930	TGFB3	ENSP00000212355	999
TIMP1	ENSP00000218388	OSM*	ENSP00000215781	911
LRP6	ENSP00000261349	FGF20*	ENSP00000180166	907
ALOX12*	ENSP00000251535	PTGS2	ENSP00000186982	920
CCND1*	ENSP00000227507	ESR1	ENSP00000206249	969
MMP9	ENSP00000216953	OSM*	ENSP00000215781	910

Symbol	StringID	Symbol	StringID	CS
MMP9	ENSP00000216953	MIF	ENSP00000215754	903
BAG4*	ENSP00000287322	TNFRSF1A	ENSP00000162749	978
MCH4*	ENSP00000286186	TNFRSF1A	ENSP00000162749	992
BMP2*	ENSP00000246044	PTGS2	ENSP00000186982	907
RENB	ENSP00000218151	NAN5*	ENSP00000210444	900
CDKN1A*	ENSP00000244741	PTGS2	ENSP00000186982	903
PTGIS	ENSP00000244043	PTGS2	ENSP00000186982	970
INS	ENSP00000250971	CPB2	ENSP00000181383	900
TNFAIP6*	ENSP00000243347	PTGS2	ENSP00000186982	916
STUB1*	ENSP00000219548	ESR1	ENSP00000206249	967
TSC2*	ENSP00000219476	ESR1	ENSP00000206249	967
TNFSF11*	ENSP00000239849	PTGS2	ENSP00000186982	917
OXT*	ENSP00000217386	ESR1	ENSP00000206249	905
MAPK1*	ENSP00000215832	ESR1	ENSP00000206249	990
CREB1*	ENSP00000236996	PTGS2	ENSP00000186982	907
IL6	ENSP00000258743	IL4R*	ENSP00000170630	924
MMP2	ENSP00000219070	CCL7*	ENSP00000200307	941
PIP5K2B*	ENSP00000269554	TNFRSF1A	ENSP00000162749	974
PLG*	ENSP00000241669	CPB2	ENSP00000181383	954
TP53*	ENSP00000269305	TNFRSF1A	ENSP00000162749	921
JAK2*	ENSP00000212292	ESR1	ENSP00000206249	911
CHUK*	ENSP00000266054	TNFRSF1A	ENSP00000162749	976
ICAM1	ENSP00000264832	TNFRSF1A	ENSP00000162749	900
SUMO1*	ENSP00000264281	TNFRSF1A	ENSP00000162749	924
TNF	ENSP00000229681	PTGS2	ENSP00000186982	925
IKBK	ENSP00000263518	TNFRSF1A	ENSP00000162749	987
BIRC3*	ENSP00000263464	TNFRSF1A	ENSP00000162749	921
IL1B*	ENSP00000263341	TNFRSF1A	ENSP00000162749	901
IL1A	ENSP00000263339	TNFRSF1A	ENSP00000162749	913
IFNG*	ENSP00000229135	PTGS2	ENSP00000186982	915
VTN	ENSP00000226218	PVR*	ENSP00000187830	981
CASP1*	ENSP00000260309	TNFRSF1A	ENSP00000162749	912
RIPK1*	ENSP00000259808	TNFRSF1A	ENSP00000162749	999

Symbol	StringID	Symbol	StringID	CS
CCL2*	ENSP00000225831	PTGS2	ENSP00000186982	900
IL10*	ENSP00000259152	TNFRSF1A	ENSP00000162749	931
TANK*	ENSP00000259075	TNFRSF1A	ENSP00000162749	915
IL6	ENSP00000258743	TNFRSF1A	ENSP00000162749	925
EDAR*	ENSP00000258443	TNFRSF1A	ENSP00000162749	922
AGT	ENSP00000258224	BCAR1*	ENSP00000162330	911
PTGDS*	ENSP00000224167	PTGS2	ENSP00000186982	934
CYBA	ENSP00000261623	NOX3*	ENSP00000159060	986
HGF	ENSP00000222390	PTGS2	ENSP00000186982	908
CYP4F2*	ENSP00000221700	PTGS2	ENSP00000186982	914
GCG	ENSP00000233604	SCT*	ENSP00000176195	900
TRPC4AP*	ENSP00000252015	TNFRSF1A	ENSP00000162749	902
NFKBIA*	ENSP00000216797	PTGS2	ENSP00000186982	911
OSM*	ENSP00000215781	PTGS2	ENSP00000186982	911
LTB*	ENSP00000244390	TNFRSF1A	ENSP00000162749	977
TGFB1	ENSP00000221930	TBX21*	ENSP00000177694	939
ESR1	ENSP00000206249	WISP2*	ENSP00000190983	900
TNFSF10*	ENSP00000241261	TNFRSF1A	ENSP00000162749	922
TNF	ENSP00000229681	IL4R*	ENSP00000170630	933
IL1R1*	ENSP00000233946	TNFRSF1A	ENSP00000162749	908
IL4*	ENSP00000231449	TNFRSF1A	ENSP00000162749	915
TNF	ENSP00000229681	TNFRSF1A	ENSP00000162749	999
IFNG*	ENSP00000229135	TNFRSF1A	ENSP00000162749	930
BIRC2*	ENSP00000227758	TNFRSF1A	ENSP00000162749	996
IL2*	ENSP00000226730	TNFRSF1A	ENSP00000162749	921
RIPK2*	ENSP00000220751	TNFRSF1A	ENSP00000162749	985
MMP2	ENSP00000219070	YB1*	ENSP00000163282	900
TIMP1	ENSP00000218388	TNFRSF1A	ENSP00000162749	910
MMP9	ENSP00000216953	TNFRSF1A	ENSP00000162749	906
NFKBIA*	ENSP00000216797	TNFRSF1A	ENSP00000162749	919
RIPK3*	ENSP00000216274	TNFRSF1A	ENSP00000162749	971
MAP3K7IP1*	ENSP00000216160	TNFRSF1A	ENSP00000162749	951
EDNRB	ENSP00000343922	GNA11*	ENSP00000078429	947

Symbol	StringID	Symbol	StringID	CS
PTGS1	ENSP00000354612	EDN1	ENSP00000075232	922
MME*	ENSP00000353679	EDN1	ENSP00000075232	935
HAND2*	ENSP00000352565	EDN1	ENSP00000075232	921
GATA2	ENSP00000345681	EDN1	ENSP00000075232	908
EDNRB	ENSP00000343922	EDN1	ENSP00000075232	994
HIF1A*	ENSP00000338018	EDN1	ENSP00000075232	906
GATA4*	ENSP00000334458	EDN1	ENSP00000075232	915
EDNRA	ENSP00000315011	GNA11*	ENSP00000078429	943
NOS2A	ENSP00000327251	EDN1	ENSP00000075232	919
VEGFA	ENSP00000317598	EDN1	ENSP00000075232	924
GNDF*	ENSP00000317145	EDN1	ENSP00000075232	900
EDNRA	ENSP00000315011	EDN1	ENSP00000075232	998
JUN*	ENSP00000314522	EDN1	ENSP00000075232	914
LEP	ENSP00000312652	EDN1	ENSP00000075232	900
NPPA	ENSP00000309540	EDN1	ENSP00000075232	934
OLR1	ENSP00000309124	EDN1	ENSP00000075232	900
FOS*	ENSP00000306245	EDN1	ENSP00000075232	916
NOS3	ENSP00000297494	EDN1	ENSP00000075232	921
VCAM1	ENSP00000294728	EDN1	ENSP00000075232	904
CTF1*	ENSP00000279804	EDN1	ENSP00000075232	900
ADM	ENSP00000278175	EDN1	ENSP00000075232	949
SLC2A1	ENSP00000270929	EDN1	ENSP00000075232	907
ICAM1	ENSP00000264832	EDN1	ENSP00000075232	903
ECE1	ENSP00000264205	EDN1	ENSP00000075232	973
TBXA2R	ENSP00000248419	GNA11*	ENSP00000078429	904
IL6	ENSP00000258743	EDN1	ENSP00000075232	911
AGT	ENSP00000258224	EDN1	ENSP00000075232	930
IL1A	ENSP00000263339	IL1RAP*	ENSP00000072516	999
INS	ENSP00000250971	EDN1	ENSP00000075232	900
CTGF*	ENSP00000237313	EDN1	ENSP00000075232	907
SLC2A4	ENSP00000320935	VAMP3*	ENSP00000054666	903
LEPR	ENSP00000330393	DCN*	ENSP00000052754	900
TNF	ENSP00000229681	EDN1	ENSP00000075232	914

Symbol	StringID	Symbol	StringID	CS
RETN*	ENSP00000221515	EDN1	ENSP00000075232	906
CASP8*	ENSP00000351273	ADRB1	ENSP00000046967	900
MMP2	ENSP00000219070	EDN1	ENSP00000075232	905
AVP*	ENSP00000217172	EDN1	ENSP00000075232	916
MMP3	ENSP00000299855	DCN*	ENSP00000052754	905
GNAS*	ENSP00000302237	ADRB1	ENSP00000046967	938
PTGS2	ENSP00000186982	EDN1	ENSP00000075232	923
IL1A	ENSP00000263339	DCN*	ENSP00000052754	900
THBS1	ENSP00000260356	DCN*	ENSP00000052754	936
NOS2A	ENSP00000327251	OTC*	ENSP00000039007	900
TNF	ENSP00000229681	TNFRSF9*	ENSP00000054670	929
TNF	ENSP00000229681	TNFRSF17*	ENSP00000053243	930
TGFB1	ENSP00000221930	DCN*	ENSP00000052754	998
NOS3	ENSP00000297494	OTC*	ENSP00000039007	900
TNFRSF1A	ENSP00000162749	TNFRSF9*	ENSP00000054670	913
IL1A	ENSP00000263339	TNFRSF1B*	ENSP00000029717	911
TNF	ENSP00000229681	TNFRSF1B*	ENSP00000029717	999
TNF	ENSP00000229681	IFNGR1*	ENSP00000029439	925
TNFRSF1A	ENSP00000162749	NSMAF*	ENSP00000038176	990
TNF	ENSP00000229681	RALBP1*	ENSP00000019317	914
TLR1	ENSP00000354932	CD4*	ENSP00000011653	908
IL15	ENSP00000296545	CD4*	ENSP00000011653	937
CD47*	ENSP00000355361	CD9	ENSP00000009180	902
CD36	ENSP00000353555	CD9	ENSP00000009180	969
ITGB1*	ENSP00000352630	CD9	ENSP00000009180	999
P23*	ENSP00000347788	CD9	ENSP00000009180	900
CD59*	ENSP00000342596	CD9	ENSP00000009180	909
TNFRSF1A	ENSP00000162749	RALBP1*	ENSP00000019317	974
ICAM1	ENSP00000264832	CD4*	ENSP00000011653	909
IL1A	ENSP00000263339	CD4*	ENSP00000011653	912
IL6	ENSP00000258743	CD4*	ENSP00000011653	925
IGSF8*	ENSP00000316664	CD9	ENSP00000009180	953
NR3C1	ENSP00000231509	PPP5C*	ENSP00000012443	907

Symbol	StringID	Symbol	StringID	CS
CD19*	ENSP00000313419	CD9	ENSP00000009180	970
SELL	ENSP00000236147	CD4*	ENSP00000011653	950
ITGA2	ENSP00000296585	CD9	ENSP00000009180	987
ITGA5*	ENSP00000293379	CD9	ENSP00000009180	964
TNF	ENSP00000229681	CD4*	ENSP00000011653	935
TFPI	ENSP00000233156	PRSS3*	ENSP00000011477	998
CD44*	ENSP00000278385	CD9	ENSP00000009180	909
ITIH4*	ENSP00000266041	CD9	ENSP00000009180	900
ADAM2*	ENSP00000265708	CD9	ENSP00000009180	921
ITGA6*	ENSP00000264106	CD9	ENSP00000009180	975
CD81*	ENSP00000263645	CD9	ENSP00000009180	966
ITGA2B	ENSP00000262407	CD9	ENSP00000009180	905
ITGB3	ENSP00000262017	CD9	ENSP00000009180	901
CD63*	ENSP00000257857	CD9	ENSP00000009180	991
ECE1	ENSP00000264205	E2F2*	ENSP00000008952	905
PTGFRN*	ENSP00000256643	CD9	ENSP00000009180	990
CX3CR1	ENSP00000351059	CX3CL1	ENSP00000006053	999
HBEGF	ENSP00000230990	CD9	ENSP00000009180	999
IFNG*	ENSP00000229135	CD9	ENSP00000009180	900
CD38*	ENSP00000226279	CD9	ENSP00000009180	936
MIF	ENSP00000215754	CD74*	ENSP00000009530	939
THBS1	ENSP00000260356	ITGA3*	ENSP00000007722	946
IL1A	ENSP00000263339	NDUFAB1*	ENSP00000007516	900
ADAM17*	ENSP00000309968	CX3CL1	ENSP00000006053	926
CXCL16	ENSP00000293778	CX3CL1	ENSP00000006053	907
ADAM10*	ENSP00000260408	CX3CL1	ENSP00000006053	929
TNF	ENSP00000229681	CX3CL1	ENSP00000006053	920
IFNG*	ENSP00000229135	CX3CL1	ENSP00000006053	914
CCL17*	ENSP00000219244	CX3CL1	ENSP00000006053	922
CCL22*	ENSP00000219235	CX3CL1	ENSP00000006053	929
TNF	ENSP00000229681	SLC7A2*	ENSP00000004531	907
VEGFA	ENSP00000317598	SEMA3F*	ENSP00000002829	921
INS	ENSP00000250971	CYP51A1*	ENSP00000003100	900

Symbol	StringID	Symbol	StringID	CS
ADAMTS13*	ENSP00000321395	CFH	ENSP00000001567	900
CRP	ENSP00000319435	CFH	ENSP00000001567	958
ADM	ENSP00000278175	CFH	ENSP00000001567	967
CFHL1*	ENSP00000251421	CFH	ENSP00000001567	954
C3*	ENSP00000245907	CFH	ENSP00000001567	978
ESR1	ENSP00000206249	FGR*	ENSP00000001380	900
NR3C1	ENSP00000231509	FKBP4*	ENSP00000001008	954
IGF2	ENSP00000348986	MPRD*	ENSP00000000412	920
PPARA	ENSP00000262735	ESRRA*	ENSP00000000442	906
CD4*	ENSP00000011653	CD9	ENSP00000009180	905
INS	ENSP00000250971	MPRD*	ENSP00000000412	900
CD9	ENSP00000009180	ITGA3*	ENSP00000007722	998

Additional File 3 - Detailed Description of the Methodology

Construction of Cardiovascular Disease Functional Linkage Network

A core network, which represents CVD associated proteins, and an extended network representing proteins that have qualified interactions with the core proteins were constructed. The construction of the CFN was started with the proteins encoded by 234 genes reported to be associated with CVD. These manually curated proteins formed the core network. To capture other proteins that have potential links with the disease, the first neighbors of the core proteins were included and all “candidate neighbors” that have interactions with any of the proteins in the core were listed regardless of an interaction confidence score. A protein was defined as “first neighbor” only if it has a qualified interaction with a core protein. To determine the threshold for the confidence score for interactions, starting from a lenient criteria (800) to a stringent confidence score (990), various networks were constructed. For each network, the coverage of the core proteins and the constitution of the core proteins in the overall network were considered. The coverage is defined as a fraction of the number of core proteins to the total number of core proteins collected and the constitution is defined as the fraction of the core proteins to the total number of proteins in the network. The aim was to keep the maximum number of core proteins in the network while considering the fraction of the core proteins in the total network.

Additional File 3 – Table 1. The coverage and constitution in the extended network.

Confidence score	800	840	860	900	940	960	980	990
<i>N</i>	2373	1975	1835	1572	802	687	447	371
<i>l</i>	6065	4631	4159	3374	1043	840	493	358
<i>c-proteins</i>	228	225	225	220	196	181	146	133
<i><k></i>	2.56	2.34	2.27	2.15	1.30	1.22	1.10	0.96
% constitution	9.61	11.39	12.26	13.99	24.44	26.35	32.66	35.85
% coverage	97.44	96.15	96.15	94.02	83.76	77.35	62.39	56.84

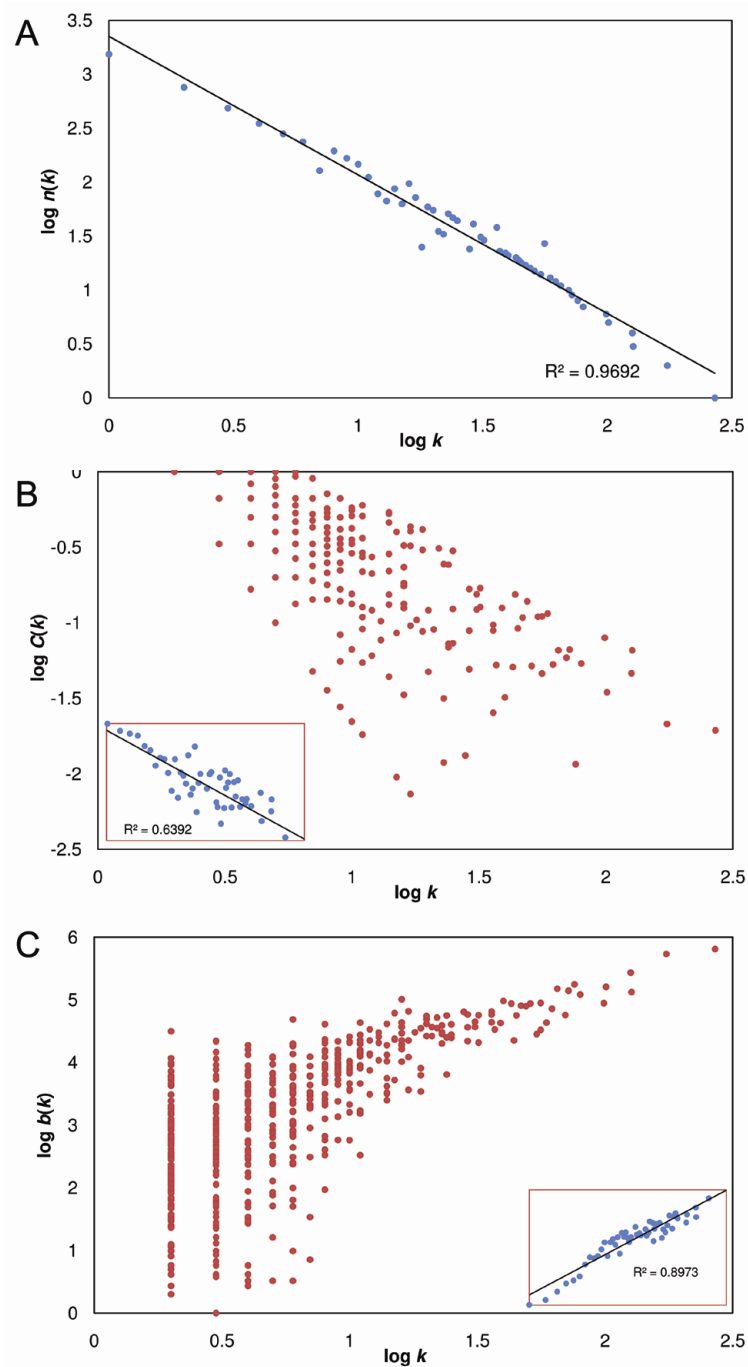
Therefore, the core network was extended with the candidate neighbors having qualified interactions with the core proteins, as well as the interactions among these neighbors. This resulted in a network consisting of 1572 nodes (proteins) and 3374 edges (qualified interactions). Visual inspection of this network revealed a giant component and some other singletons that have no connection with the giant component. Therefore, these orphan nodes (36) and their interconnections (29) were excluded from the network. Finally, the giant

component comprising 1536 nodes and 3345 interactions was entitled as cardiovascular disease functional linkage network. Among these 1536 nodes, 206 out of 234 (88.03%) nodes were the members of the core, constituting 13.41% of the extended network.

Interpretation of Topological Measures

The topological features of this extended network were analyzed by investigating the degree, k , clustering coefficient, C , and betweenness, b , for each node. The average degree $\langle k \rangle$, average clustering coefficient $\langle C \rangle$ and average betweenness $\langle b \rangle$ for the network were calculated to be 4.35, 0.197, 4569, respectively. For a random network with the same number of nodes and edges, the $\langle C \rangle$ was calculated as 0.0023. A higher average clustering coefficient than that of a random network is considered to be an indicator of a scale-free network; suggesting that our extended network is scale free. The cumulative degree distribution $n(k)$ (Fig. 2A) and average clustering coefficient distribution $C(k)$ (Fig. 2B) with respect to degree distribution, followed the power law, indicating that many proteins are linked to a few other proteins but only a few of them have many interactions, hence providing additional evidence that the network of interest exhibits a scale-free behavior with degree exponent, $\gamma = 2.28$.

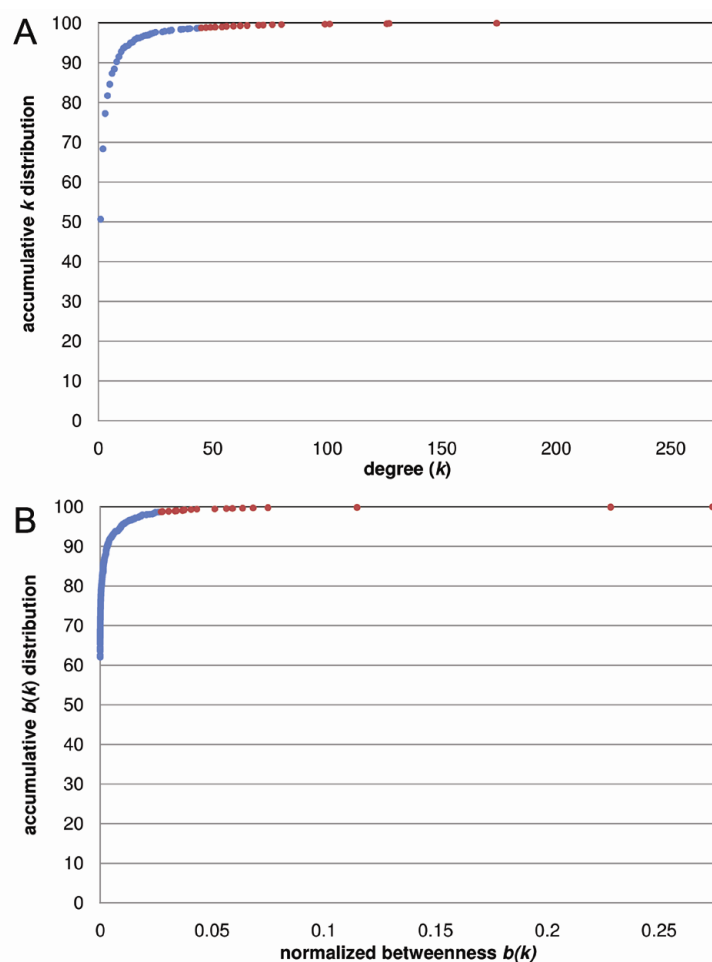
The average betweenness distribution $b(k)$ was also well-characterized with power law scaling (Fig. 2C), meaning that many proteins are located at the periphery while a few proteins are located at the center of the network, and hence responsible for communication within the network. The effect of removing the nodes with higher betweenness is similar to that of excluding a hub protein from the network and proteins displaying high betweenness are reported to be likely essential and evolutionary conserved.



Additional File 3 - Figure 2. Topological properties of CFN. In order to obtain supporting evidence to show whether CFN is scale-free, the distributions of (A) cumulative degree, $n(k)$, (B) average clustering coefficient, $C(k)$, and (C) average betweenness, $b(k)$ are plotted against the degree distribution, k . The negative slope in log-log representation of the graph (A) gives the degree exponent, $\gamma = 2.28$, which is an indicator of a scale-free network. Power law fittings in (B) and (C) are presented in insets.

Selection of Hub Proteins in CFN

Hub proteins are mostly distinguished by their degree, but there is no consensus on how many interactions a hub protein should have. The nodes that are above the position of the sharp turn on the accumulative protein degree distribution or the nodes with half of the maximum degrees are accepted as the criteria for the selection of hub proteins. A hub protein acts like a bridge in the network, since it should have large number of neighbors, but these neighbors should have fewer interactions in between. In this study, both degree and betweenness measures were taken as the basis in the selection of hubs. Each protein in the network was ranked according to their degree and betweenness, and 15 proteins that were listed in both top 20 highest degree and 20 highest betweenness nodes were selected as hub proteins.



Additional File 3 - Figure 3. Selection of hub proteins. Accumulative (A) degree, k , and (B) betweenness, $b(k)$, distributions are investigated with respect to each related individual property value. The criteria accepted as the basis of hub protein selection is to rank each protein in the network according to these values and 15 proteins in both top 20 nodes with highest degree and betweenness are selected as hub proteins.

KEGG pathway database was searched to elucidate the function of hub proteins in the biological pathways. The entire network of proteins display an average presence in two biological pathways, however, the hub proteins function in 4.8 biological pathways, on the average. The KEGG pathways were found to be related with several aspects of signaling pathways: MAPK, JAK-STAT, TGF-beta, calcium, insulin, adipocytokine signaling pathways, and as well as disease pathways: Asthma, Alzheimer's disease, Prion disease, Type 1 and Type 2 diabetes mellitus, and some cancer variants. The presence of TNF α in 15 pathways ranging from the immune system to signal transduction pathways implies that this protein is responsible for crosstalk between signaling pathways, in concordance with previous reports.

Additional File 4 - GO terms associated with hub proteins ($p\text{-value} < 6.13 \times 10^{-04}$, $bf \leq 1.0\%$), bf denotes the background frequency of the GO term

GO Term	Genes	$p\text{-value}$	bf
GO:0045834 positive regulation of lipid metabolic process	IRS1 TNF TGFB1 PTGS2 INS IL1A AGT	9.96×10^{-13}	102/53334 (0.2%)
GO:0030335 positive regulation of cell migration	IRS1 TGFB1 PTGS2 INS INSR VEGFA IL6 AGT	8.21×10^{-12}	287/53334 (0.5%)
GO:0051046 regulation of secretion	LEP NOS2 IRS1 TNF TGFB1 INS IL1A IL6 AGT	8.67×10^{-12}	530/53334 (1.0%)
GO:0019216 regulation of lipid metabolic process	LEP IRS1 TNF TGFB1 PTGS2 INS IL1A AGT	9.43×10^{-12}	292/53334 (0.5%)
GO:0051272 positive regulation of cellular component movement	IRS1 TGFB1 PTGS2 INS INSR VEGFA IL6 AGT	1.34×10^{-11}	305/53334 (0.6%)
GO:0042327 positive regulation of phosphorylation	IRS1 TNF TGFB1 INS INSR VEGFA IL6 AGT	2.18×10^{-11}	324/53334 (0.6%)
GO:0040017 positive regulation of locomotion	IRS1 TGFB1 PTGS2 INS INSR VEGFA IL6 AGT	2.41×10^{-11}	328/53334 (0.6%)
GO:0010562 positive regulation of phosphorus metabolic process	IRS1 TNF TGFB1 INS INSR VEGFA IL6 AGT	2.47×10^{-11}	329/53334 (0.6%)
GO:0045937 positive regulation of phosphate metabolic process	IRS1 TNF TGFB1 INS INSR VEGFA IL6 AGT	2.47×10^{-11}	329/53334 (0.6%)
GO:0006953 acute-phase response	STAT3 TNF PTGS2 INS IL1A IL6	1.30×10^{-10}	84/53334 (0.2%)
GO:0043410 positive regulation of MAPKKK cascade	LEP TNF INS INSR IL1A IL6 AGT	2.63×10^{-10}	223/53334 (0.4%)
GO:0032101 regulation of response to external stimulus	LEP TNF TGFB1 PTGS2 INS VEGFA IL6 AGT	2.69×10^{-10}	443/53334 (0.8%)
GO:0030334 regulation of cell migration	IRS1 TGFB1 PTGS2 INS INSR VEGFA IL6 AGT	5.83×10^{-10}	488/53334 (0.9%)
GO:0010740 positive regulation of intracellular protein kinase cascade	LEP TNF TGFB1 INS INSR IL1A IL6 AGT	9.70×10^{-10}	520/53334 (1.0%)
GO:0046889 positive regulation of lipid biosynthetic process	TNF PTGS2 INS IL1A AGT	1.13×10^{-09}	40/53334 (0.1%)
GO:0051270 regulation of cellular component movement	IRS1 TGFB1 PTGS2 INS INSR VEGFA IL6 AGT	1.18×10^{-09}	533/53334 (1.0%)
GO:0040012 regulation of locomotion	IRS1 TGFB1 PTGS2 INS INSR VEGFA IL6 AGT	1.59×10^{-09}	553/53334 (1.0%)
GO:0046890 regulation of lipid biosynthetic process	LEP TNF PTGS2 INS IL1A AGT	1.90×10^{-09}	130/53334 (0.2%)
GO:0001934 positive regulation of protein amino acid phosphorylation	TNF TGFB1 INS INSR VEGFA IL6 AGT	2.13×10^{-09}	300/53334 (0.6%)
GO:0048545 response to steroid hormone stimulus	STAT3 TNF TGFB1 PTGS2 INSR ESR1 IL6	4.81×10^{-09}	337/53334 (0.6%)
GO:0043408 regulation of MAPKKK cascade	LEP TNF INS INSR IL1A IL6 AGT	1.20×10^{-08}	384/53334 (0.7%)
GO:0032103 positive regulation of response to external stimulus	TNF TGFB1 PTGS2 VEGFA IL6 AGT	2.67×10^{-08}	201/53334 (0.4%)
GO:0002526 acute inflammatory response	STAT3 TNF PTGS2 INS IL1A IL6	2.75×10^{-08}	202/53334 (0.4%)
GO:0031401 positive regulation of protein modification process	TNF TGFB1 INS INSR VEGFA IL6 AGT	5.98×10^{-08}	483/53334 (0.9%)
GO:0032355 response to estradiol stimulus	STAT3 TGFB1 PTGS2 INSR ESR1	6.68×10^{-08}	88/53334 (0.2%)

GO Term	Genes	<i>p</i> -value	<i>bf</i>
GO:0001932 regulation of protein amino acid phosphorylation	TNF TGFB1 INS INSR VEGFA IL6 AGT	6.80x10 ⁻⁰⁸	492/53334 (0.9%)
GO:0006809 nitric oxide biosynthetic process	NOS2 TNF PTGS2 INS INSR	7.49x10 ⁻⁰⁸	90/53334 (0.2%)
GO:0010817 regulation of hormone levels	LEP NOS2 IRS1 TNF ESR1 IL6 AGT	7.82x10 ⁻⁰⁸	502/53334 (0.9%)
GO:0046209 nitric oxide metabolic process	NOS2 TNF PTGS2 INS INSR	8.38x10 ⁻⁰⁸	92/53334 (0.2%)
GO:0001817 regulation of cytokine production	TNF TGFB1 PTGS2 INS IL1A IL6 AGT	8.62x10 ⁻⁰⁸	509/53334 (1.0%)
GO:0001819 positive regulation of cytokine production	TNF TGFB1 PTGS2 IL1A IL6 AGT	8.62x10 ⁻⁰⁸	244/53334 (0.5%)
GO:0048659 smooth muscle cell proliferation	TNF PTGS2 VEGFA IL6 AGT	1.04x10 ⁻⁰⁷	96/53334 (0.2%)
GO:0009746 response to hexose stimulus	IRS1 TGFB1 EGR1 PTGS2 INSR	1.64x10 ⁻⁰⁷	105/53334 (0.2%)
GO:0034284 response to monosaccharide stimulus	IRS1 TGFB1 EGR1 PTGS2 INSR	1.64x10 ⁻⁰⁷	105/53334 (0.2%)
GO:0009743 response to carbohydrate stimulus	IRS1 TGFB1 EGR1 PTGS2 INSR	2.97x10 ⁻⁰⁷	118/53334 (0.2%)
GO:0051047 positive regulation of secretion	IRS1 TNF TGFB1 INS IL1A IL6	3.17x10 ⁻⁰⁷	303/53334 (0.6%)
GO:0090068 positive regulation of cell cycle process	TNF TGFB1 INS INSR IL1A	3.82x10 ⁻⁰⁷	124/53334 (0.2%)
GO:0050714 positive regulation of protein secretion	TNF TGFB1 INS IL1A IL6	5.44x10 ⁻⁰⁷	133/53334 (0.2%)
GO:0051051 negative regulation of transport	IRS1 TNF TGFB1 PTGS2 INS INSR	6.00x10 ⁻⁰⁷	337/53334 (0.6%)
GO:0051384 response to glucocorticoid stimulus	TNF TGFB1 PTGS2 INSR IL6	6.55x10 ⁻⁰⁷	138/53334 (0.3%)
GO:0010565 regulation of cellular ketone metabolic process	LEP IRS1 PTGS2 INS AGT	7.05x10 ⁻⁰⁷	140/53334 (0.3%)
GO:0043434 response to peptide hormone stimulus	LEP STAT3 IRS1 EGR1 INS INSR	7.66x10 ⁻⁰⁷	351/53334 (0.7%)
GO:0031960 response to corticosteroid stimulus	TNF TGFB1 PTGS2 INSR IL6	8.71x10 ⁻⁰⁷	146/53334 (0.3%)
GO:0033002 muscle cell proliferation	TNF PTGS2 VEGFA IL6 AGT	8.71x10 ⁻⁰⁷	146/53334 (0.3%)
GO:0043627 response to estrogen stimulus	STAT3 TGFB1 PTGS2 INSR ESR1	2.05x10 ⁻⁰⁶	173/53334 (0.3%)
GO:0050708 regulation of protein secretion	TNF TGFB1 INS IL1A IL6	2.05x10 ⁻⁰⁶	173/53334 (0.3%)
GO:0051091 positive regulation of transcription factor activity	TNF TGFB1 INS IL6 AGT	3.20x10 ⁻⁰⁶	189/53334 (0.4%)
GO:0090047 positive regulation of transcription regulator activity	TNF TGFB1 INS IL6 AGT	3.28x10 ⁻⁰⁶	190/53334 (0.4%)
GO:0023036 initiation of signal transduction	LEP STAT3 TNF IL1A IL6	3.28x10 ⁻⁰⁶	190/53334 (0.4%)
GO:0023038 signal initiation by diffusible mediator	LEP STAT3 TNF IL1A IL6	3.28x10 ⁻⁰⁶	190/53334 (0.4%)
GO:0023049 signal initiation by protein/peptide mediator	LEP STAT3 TNF IL1A IL6	3.28x10 ⁻⁰⁶	190/53334 (0.4%)
GO:0019221 cytokine-mediated signaling pathway	LEP STAT3 TNF IL1A IL6	3.28x10 ⁻⁰⁶	190/53334 (0.4%)
GO:0050727 regulation of inflammatory response	TNF PTGS2 INS IL6 AGT	3.37x10 ⁻⁰⁶	191/53334 (0.4%)

GO Term	Genes	<i>p</i> -value	<i>bf</i>
GO:0030072 peptide hormone secretion	LEP NOS2 IRS1 TNF IL6	3.74x10 ⁻⁰⁶	195/53334 (0.4%)
GO:0051241 negative regulation of multicellular organismal process	TNF TGFB1 PTGS2 INS VEGFA IL6	3.96x10 ⁻⁰⁶	462/53334 (0.9%)
GO:0002790 peptide secretion	LEP NOS2 IRS1 TNF IL6	4.81x10 ⁻⁰⁶	205/53334 (0.4%)
GO:0046660 female sex differentiation	LEP TGFB1 VEGFA ESR1 AGT	4.81x10 ⁻⁰⁶	205/53334 (0.4%)
GO:0043388 positive regulation of DNA binding	TNF TGFB1 INS IL6 AGT	4.92x10 ⁻⁰⁶	206/53334 (0.4%)
GO:0051222 positive regulation of protein transport	TNF TGFB1 INS IL1A IL6	7.66x10 ⁻⁰⁶	225/53334 (0.4%)
GO:0015833 peptide transport	LEP NOS2 IRS1 TNF IL6	8.94x10 ⁻⁰⁶	232/53334 (0.4%)
GO:0048871 multicellular organismal homeostasis	STAT3 TNF PTGS2 VEGFA IL1A	8.94x10 ⁻⁰⁶	232/53334 (0.4%)
GO:0031644 regulation of neurological system process	TNF EGR1 PTGS2 IL1A AGT	9.73x10 ⁻⁰⁶	236/53334 (0.4%)
GO:0051099 positive regulation of binding	TNF TGFB1 INS IL6 AGT	9.73x10 ⁻⁰⁶	236/53334 (0.4%)
GO:0010638 positive regulation of organelle organization	TNF TGFB1 INS INSR IL1A	1.22x10 ⁻⁰⁵	247/53334 (0.5%)
GO:0009306 protein secretion	TNF TGFB1 INS IL1A IL6	1.27x10 ⁻⁰⁵	249/53334 (0.5%)
GO:0046879 hormone secretion	LEP NOS2 IRS1 TNF IL6	1.41x10 ⁻⁰⁵	254/53334 (0.5%)
GO:0032868 response to insulin stimulus	LEP IRS1 EGR1 INS INSR	1.43x10 ⁻⁰⁵	255/53334 (0.5%)
GO:0048754 branching morphogenesis of a tube	TNF TGFB1 VEGFA ESR1 AGT	1.77x10 ⁻⁰⁵	266/53334 (0.5%)
GO:0009914 hormone transport	LEP NOS2 IRS1 TNF IL6	1.84x10 ⁻⁰⁵	268/53334 (0.5%)
GO:0032844 regulation of homeostatic process	TNF TGFB1 PTGS2 VEGFA AGT	2.29x10 ⁻⁰⁵	280/53334 (0.5%)
GO:0061138 morphogenesis of a branching epithelium	TNF TGFB1 VEGFA ESR1 AGT	3.23x10 ⁻⁰⁵	300/53334 (0.6%)
GO:0018108 peptidyl-tyrosine phosphorylation	INS INSR VEGFA IL6 AGT	3.34x10 ⁻⁰⁵	302/53334 (0.6%)
GO:0018212 peptidyl-tyrosine modification	INS INSR VEGFA IL6 AGT	3.45x10 ⁻⁰⁵	304/53334 (0.6%)
GO:0051090 regulation of transcription factor activity	TNF TGFB1 INS IL6 AGT	3.74x10 ⁻⁰⁵	309/53334 (0.6%)
GO:0002697 regulation of immune effector process	NOS2 TNF TGFB1 INS IL6	3.74x10 ⁻⁰⁵	309/53334 (0.6%)
GO:0090046 regulation of transcription regulator activity	TNF TGFB1 INS IL6 AGT	3.80x10 ⁻⁰⁵	310/53334 (0.6%)
GO:0060562 epithelial tube morphogenesis	TNF TGFB1 VEGFA ESR1 AGT	5.59x10 ⁻⁰⁵	335/53334 (0.6%)
GO:0051223 regulation of protein transport	TNF TGFB1 INS IL1A IL6	6.86x10 ⁻⁰⁵	349/53334 (0.7%)
GO:0051101 regulation of DNA binding	TNF TGFB1 INS IL6 AGT	7.06x10 ⁻⁰⁵	351/53334 (0.7%)
GO:0001763 morphogenesis of a branching structure	TNF TGFB1 VEGFA ESR1 AGT	7.26x10 ⁻⁰⁵	353/53334 (0.7%)
GO:0070201 regulation of establishment of protein localization	TNF TGFB1 INS IL1A IL6	8.45x10 ⁻⁰⁵	364/53334 (0.7%)

GO Term	Genes	<i>p</i> -value	<i>bf</i>
GO:0032870 cellular response to hormone stimulus	STAT3 IRS1 TGFB1 INS INSR	9.55x10 ⁻⁰⁵	373/53334 (0.7%)
GO:0001655 urogenital system development	TGFB1 EGR1 VEGFA ESR1 AGT	9.93x10 ⁻⁰⁵	376/53334 (0.7%)
GO:0071495 cellular response to endogenous stimulus	STAT3 IRS1 TGFB1 INS INSR	1.09x10 ⁻⁰⁴	383/53334 (0.7%)
GO:0031347 regulation of defense response	TNF PTGS2 INS IL6 AGT	1.30x10 ⁻⁰⁴	397/53334 (0.7%)
GO:0032880 regulation of protein localization	TNF TGFB1 INS IL1A IL6	1.35x10 ⁻⁰⁴	400/53334 (0.7%)
GO:0007346 regulation of mitotic cell cycle	TNF TGFB1 INS INSR IL1A	1.40x10 ⁻⁰⁴	403/53334 (0.8%)
GO:0003001 generation of a signal involved in cell-cell signaling	LEP NOS2 IRS1 TNF IL6	1.45x10 ⁻⁰⁴	406/53334 (0.8%)
GO:0023061 signal release	LEP NOS2 IRS1 TNF IL6	1.45x10 ⁻⁰⁴	406/53334 (0.8%)
GO:0015980 energy derivation by oxidation of organic compounds	LEP NOS2 IRS1 INS INSR	1.58x10 ⁻⁰⁴	413/53334 (0.8%)
GO:0031667 response to nutrient levels	LEP TGFB1 PTGS2 INSR IL1A	1.68x10 ⁻⁰⁴	418/53334 (0.8%)
GO:0007548 sex differentiation	LEP TGFB1 VEGFA ESR1 AGT	1.74x10 ⁻⁰⁴	421/53334 (0.8%)
GO:0035239 tube morphogenesis	TNF TGFB1 VEGFA ESR1 AGT	2.14x10 ⁻⁰⁴	439/53334 (0.8%)
GO:0006916 anti-apoptosis	TNF VEGFA IL1A ESR1 IL6	2.39x10 ⁻⁰⁴	449/53334 (0.8%)
GO:0051098 regulation of binding	TNF TGFB1 INS IL6 AGT	2.39x10 ⁻⁰⁴	449/53334 (0.8%)
GO:0006006 glucose metabolic process	LEP IRS1 TNF INS INSR	2.64x10 ⁻⁰⁴	458/53334 (0.9%)
GO:0009991 response to extracellular stimulus	LEP TGFB1 PTGS2 INSR IL1A	2.85x10 ⁻⁰⁴	465/53334 (0.9%)
GO:0008202 steroid metabolic process	LEP TNF IL1A ESR1 AGT	3.20x10 ⁻⁰⁴	476/53334 (0.9%)
GO:0006631 fatty acid metabolic process	LEP IRS1 PTGS2 INS AGT	3.37x10 ⁻⁰⁴	481/53334 (0.9%)
GO:0032583 regulation of gene-specific transcription	TNF TGFB1 INS INSR IL6	4.08x10 ⁻⁰⁴	500/53334 (0.9%)
GO:0051130 positive regulation of cellular component organization	TNF TGFB1 INS INSR IL1A	4.16x10 ⁻⁰⁴	502/53334 (0.9%)
GO:0048732 gland development	IRS1 TNF TGFB1 VEGFA ESR1	4.24x10 ⁻⁰⁴	504/53334 (0.9%)
GO:0033674 positive regulation of kinase activity	IRS1 TNF TGFB1 INS INSR	4.45x10 ⁻⁰⁴	509/53334 (1.0%)
GO:0010564 regulation of cell cycle process	TNF TGFB1 INS INSR IL1A	4.81x10 ⁻⁰⁴	517/53334 (1.0%)
GO:0045597 positive regulation of cell differentiation	LEP TGFB1 INS IL6 AGT	5.04x10 ⁻⁰⁴	522/53334 (1.0%)
GO:0051347 positive regulation of transferase activity	IRS1 TNF TGFB1 INS INSR	5.24x10 ⁻⁰⁴	526/53334 (1.0%)
GO:0019318 hexose metabolic process	LEP IRS1 TNF INS INSR	6.13x10 ⁻⁰⁴	543/53334 (1.0%)

Additional File 5 - 566 functional modules with modularity, $Q = 1$. In CFN consisting of 1536 nodes and 3345 interactions, 566 functional modules of size four and above were investigated. The minimum and maximum interaction confidence scores present in functional module are shown with CS_{min} and CS_{max} . The average confidence score of a functional module is denoted by CS_{avg} . The proteins added to the network by extension are indicated with “*”.

module#	CS_{min}	CS_{max}	CS_{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
1	900	993	925.964	8	TNF	IL6	IL1A	VEGFA	CSF1	CSF2	ICAM1	IL4*
2	900	993	925.381	7	TNF	IL6	IL1A	JUN*	TGFB1	ICAM1	MMP9	
3	900	993	920.857	7	TNF	IL6	IL1A	VEGFA	TGFB1	ICAM1	MMP9	
4	900	993	916.143	7	TNF	IL6	IL1A	VEGFA	CCL2*	ICAM1	MMP9	
5	900	993	918.762	7	TNF	IL6	IL1A	VEGFA	MAPK8*	ICAM1	MMP9	
6	900	993	925.238	7	TNF	IL6	IL1A	VEGFA	TGFB1	IL8*	MMP9	
7	900	982	912.571	7	TNF	IL6	INS	VEGFA	ICAM1	MAPK8*	MMP9	
8	900	993	922.714	7	TNF	IL6	IL1A	VEGFA	TGFB1	BCL2*	MMP9	
9	900	993	926.524	7	TNF	IL6	IL1A	VEGFA	TGFB1	IL8*	MMP2	
10	900	993	934.952	7	TNF	IL6	IL1A	TLR2	CSF1	CSF2	IL2*	
11	903	993	928.048	7	TNF	IL6	IL1A	TLR2	NOS2A	PTGS2	IFNG*	
12	903	993	931.952	7	TNF	IL6	IL1A	TLR2	TLR4	PTGS2	IFNG*	
13	904	993	931.429	7	TNF	IL6	IL1A	TLR2	NOS2A	CSF2	IFNG*	
14	900	993	935.952	7	TNF	IL6	IL1A	TLR2	CSF1	CSF2	IFNG*	
15	900	993	934.762	7	TNF	IL6	IL1A	TLR2	TLR4	CSF2	IFNG*	
16	900	993	925.667	7	TNF	IL6	IL1A	VEGFA	TGFB1	ICAM1	IL4*	
17	904	993	929.143	7	TNF	IL6	IL1A	TLR2	NOS2A	CSF2	IL4*	
18	900	993	933.238	7	TNF	IL6	IL1A	TLR2	CSF1	CSF2	IL4*	
19	900	993	932.333	7	TNF	IL6	IL1A	TLR2	TLR4	CSF2	IL4*	
20	904	993	928.238	7	TNF	IL6	IL1A	VEGFA	CSF2	NOS2A	IL4*	
21	904	993	931.476	7	TNF	IL6	IL1A	TLR2	NOS2A	CSF2	IL10*	
22	900	993	935.095	7	TNF	IL6	IL1A	TLR2	TLR4	CSF2	IL10*	
23	900	993	922.714	7	TNF	IL6	IL1A	VEGFA	CD40	CSF2	ICAM1	
24	900	993	921.286	7	TNF	IL6	IL1A	TLR2	NOS2A	PTGS2	CD40	
25	900	993	925.19	7	TNF	IL6	IL1A	TLR2	TLR4	PTGS2	CD40	
26	904	993	925.143	7	TNF	IL6	IL1A	TLR2	NOS2A	CSF2	CD40	
27	900	993	928.476	7	TNF	IL6	IL1A	TLR2	TLR4	CSF2	CD40	
28	900	993	920.762	7	TNF	IL6	IL1A	VEGFA	PTGS2	NOS2A	CD40	
29	900	993	920.571	7	TNF	IL6	IL1A	VEGFA	CCL2*	ICAM1	CSF2	
30	900	993	930.381	7	TNF	IL6	IL1A	JUN*	CSF1	ICAM1	CSF2	

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
31	900	993	924.333	7	TNF	IL6	IL1A	VEGFA	FAS1*	ICAM1	CSF2	
32	900	993	931.476	7	TNF	IL6	IL1A	IL2*	ICAM1	CSF1	CSF2	
33	900	993	922.238	7	TNF	IL6	IL1A	IL3*	ICAM1	CSF1	CSF2	
34	900	999	934.762	7	TNF	IL6	IL1A	TLR2	TLR4	CSF2	CD14*	
35	900	993	923.381	7	TNF	IL6	IL1A	VEGFA	TGFB1	ICAM1	IL13*	
36	900	993	923.81	7	TNF	IL6	IL1A	VEGFA	CSF2	ICAM1	IL13*	
37	904	993	935.143	7	TNF	IL6	IL1A	VEGFA	CSF1	CSF2	FOS*	
38	900	984	919.286	7	TNF	IL6	EDN1	VEGFA	INS	LEP	FOS*	
39	900	984	919.762	7	TNF	IL6	INS	VEGFA	STAT3	LEP	FOS*	
40	903	993	926.667	7	TNF	IL6	IL1A	VEGFA	STAT3	LEP	FOS*	
41	904	984	924.571	7	TNF	IL6	IGF1	VEGFA	STAT3	LEP	FOS*	
42	900	993	922.333	7	TNF	IL6	IL1A	TLR2	NOS2A	PTGS2	IL8*	
43	900	993	925.81	7	TNF	IL6	IL1A	TLR2	TLR4	PTGS2	IL8*	
44	900	993	925.286	7	TNF	IL6	IL1A	TLR2	NOS2A	CSF2	IL8*	
45	900	993	928.19	7	TNF	IL6	IL1A	TLR2	TLR4	CSF2	IL8*	
46	900	993	922.19	7	TNF	IL6	IL1A	VEGFA	PTGS2	NOS2A	IL8*	
47	900	993	925.095	7	TNF	IL6	IL1A	VEGFA	CSF2	NOS2A	IL8*	
48	900	999	926.571	7	TNF	IL6	IL1A	TNFRSF1A	ICAM1	MMP9	JUN*	
49	904	993	926.952	7	TNF	IL6	IL1A	VEGFA	TGFB1	IL4*	NOS2A	
50	904	993	924.571	7	TNF	IL6	IL1A	VEGFA	CD40	CSF2	NOS2A	
51	900	993	924.667	7	TNF	IL6	IL1A	VEGFA	TGFB1	IL8*	NOS2A	
52	900	993	932.524	7	TNF	IL6	IL1A	IFNG*	CSF2	ICAM1	CSF1	
53	900	999	926.286	7	TNF	IL6	IL1A	TNFRSF1A	ICAM1	MMP9	MAPK8*	
54	911	926	918.8	6	TNF	NOS3	VEGFA	NOS2A	PTGS2	EDN1		
55	900	993	922.267	6	TNF	IL6	IL1A	VEGFA	CCL2*	PTGS2		
56	906	983	927	6	TNF	IL6	EDN1	JUN*	NOS2A	PTGS2		
57	911	964	921.4	6	TNF	IL6	EDN1	VEGFA	NOS2A	PTGS2		
58	903	993	926.867	6	TNF	IL6	IL1A	TLR4	PTGS2	NFKBIA*		
59	908	999	934	6	TNF	IL6	IL1A	TNFRSF1A	TLR4	NFKBIA*		
60	900	999	930.867	6	TNF	IL6	IL1A	TNFRSF1A	TIMP1	MMP9		
61	900	993	929.733	6	TNF	IL6	IL1A	TIMP1	TGFB1	MMP9		
62	900	991	915.6	6	FGFB*	IL6	VEGFA	TGFB1	IL1A	MMP9		
63	900	981	910.467	6	TNF	MAPK3*	VEGFA	INS	ICAM1	MMP9		
64	900	983	918.067	6	TNF	IL6	INS	JUN*	ICAM1	MMP9		
65	900	999	931.533	6	TNF	IL6	IL1A	TNFRSF1A	IL8*	MMP9		
66	900	999	927.533	6	TNF	IL6	IL1A	TNFRSF1A	BCL2*	MMP9		
67	900	996	935.2	6	TNF	IL6	IL1A	TIMP1	TGFB1	MMP2		

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
68	900	993	918.933	6	TNF	IL6	IL1A	VEGFA	CCL2*	MMP2		
69	900	991	919.467	6	FGFB*	IL6	VEGFA	TGFB1	IL1A	MMP2		
70	900	993	920.533	6	TNF	IL6	IL1A	VEGFA	STAT3	MMP2		
71	900	964	915.4	6	TNF	IL6	TP53*	VEGFA	STAT3	MMP2		
72	900	993	937.933	6	TNF	IL6	IL1A	IL2*	ICAM1	TGFB1		
73	900	993	932.667	6	TNF	IL6	IL1A	JUN*	TGFB1	SERPINE1		
74	900	993	925.733	6	TNF	IL6	IL1A	VEGFA	TGFB1	SERPINE1		
75	900	993	923.067	6	TNF	IL6	IL1A	VEGFA	MAPK8*	SERPINE1		
76	900	999	934.533	6	TNF	IL6	IL1A	TNFRSF1A	ICAM1	IL2*		
77	904	999	932.533	6	TNF	VCAM1	NOS2A	IL1A	TNFRSF1A	IFNG*		
78	900	999	936.6	6	TNF	IL6	IL1A	TNFRSF1A	ICAM1	IFNG*		
79	904	999	938.667	6	TNF	IL6	IL1A	TNFRSF1A	NOS2A	IFNG*		
80	913	999	943.133	6	TNF	IL6	IL1A	TNFRSF1A	TLR4	IFNG*		
81	914	994	941.4	6	TNF	IL6	TLR1	TLR2	TLR4	IFNG*		
82	904	999	927.8	6	TNF	VCAM1	NOS2A	IL1A	TNFRSF1A	IL4*		
83	903	993	928.733	6	TNF	IL6	IL1A	VEGFA	STAT3	IL4*		
84	900	999	932.333	6	TNF	IL6	IL1A	TNFRSF1A	ICAM1	IL4*		
85	904	993	921.667	6	TNF	VCAM1	NOS2A	IL1A	VEGFA	IL4*		
86	904	999	934.333	6	TNF	IL6	IL1A	TNFRSF1A	NOS2A	IL4*		
87	913	999	938.6	6	TNF	IL6	IL1A	TNFRSF1A	TLR4	IL4*		
88	907	994	937.6	6	TNF	IL6	TLR1	TLR2	TLR4	IL4*		
89	902	999	935	6	TNF	IL6	IL1A	TNFRSF1A	NOS2A	IL1R1*		
90	902	999	930.933	6	TNF	IL6	IL1A	TLR2	NOS2A	IL1R1*		
91	908	999	940.267	6	TNF	IL6	IL1A	TNFRSF1A	TLR4	IL1R1*		
92	915	999	937.267	6	TNF	IL6	IL1A	TLR2	TLR4	IL1R1*		
93	900	972	916.933	6	TNF	IL6	EGFR*	VEGFA	STAT3	INS		
94	900	974	915.667	6	POMC*	LEP	IL6	STAT3	VEGFA	INS		
95	904	999	930.6	6	TNF	VCAM1	NOS2A	IL1A	TNFRSF1A	IL10*		
96	900	999	936.6	6	TNF	IL6	IL1A	TNFRSF1A	TIMP1	IL10*		
97	900	993	934	6	TNF	IL6	IL1A	TIMP1	TGFB1	IL10*		
98	900	999	935.733	6	TNF	IL6	IL1A	TNFRSF1A	ICAM1	IL10*		
99	904	999	937.933	6	TNF	IL6	IL1A	TNFRSF1A	NOS2A	IL10*		
100	913	999	942.8	6	TNF	IL6	IL1A	TNFRSF1A	TLR4	IL10*		
101	902	981	918.133	6	TNF	NOS3	VEGFA	NOS2A	PTGS2	MAPK3*		
102	903	974	919.067	6	POMC*	LEP	IL6	STAT3	VEGFA	IL1A		
103	900	993	930.2	6	TNF	IL6	IL1A	VEGFA	MAPK8*	STAT3		
104	900	930	910.467	6	AGT	IL6	VEGFA	INS	EDN1	ICAM1		

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
105	900	993	934.267	6	TNF	IL6	IL1A	IFNG*	TGFB1	ICAM1		
106	900	993	933.2	6	TNF	IL6	IL1A	IL10*	TGFB1	ICAM1		
107	900	972	912.133	6	AGT	IL6	JUN*	EDN1	INS	ICAM1		
108	900	983	918.867	6	TNF	IL6	EDN1	JUN*	INS	ICAM1		
109	900	964	912.933	6	TNF	IL6	EDN1	VEGFA	INS	ICAM1		
110	900	927	908.8	6	AGT	IL6	VEGFA	INS	TP53*	ICAM1		
111	900	993	926.467	6	TNF	IL6	IL1A	VEGFA	IL18*	ICAM1		
112	900	993	933.533	6	TNF	IL6	IL1A	IL10*	CSF2	ICAM1		
113	900	964	911.733	6	TNF	IL6	INS	VEGFA	SERPINE1	TP53*		
114	900	927	911.733	6	AGT	IL6	VEGFA	STAT3	INS	TP53*		
115	900	964	914.533	6	TNF	IL6	INS	VEGFA	STAT3	TP53*		
116	900	964	912.4	6	TNF	IL6	INS	VEGFA	ICAM1	TP53*		
117	900	972	915.067	6	AGT	IL6	VEGFA	STAT3	INS	EGFR*		
118	904	972	922.867	6	TNF	IL6	IGF1	VEGFA	STAT3	EGFR*		
119	900	993	930	6	TNF	IL6	IL1A	IL5*	ICAM1	CSF2		
120	900	993	926.467	6	TNF	IL6	IL1A	IL2RA*	ICAM1	CSF2		
121	910	993	938.067	6	TNF	IL6	IL1A	CSF3*	CSF1	CSF2		
122	903	993	926.333	6	TNF	IL6	IL1A	VEGFA	PTGS2	IL13*		
123	903	993	927.8	6	TNF	IL6	IL1A	TLR4	PTGS2	IL13*		
124	900	993	931.133	6	TNF	IL6	IL1A	TLR4	CSF2	IL13*		
125	905	983	923.667	6	AGT	IL6	VEGFA	PTGS2	EDN1	FOS*		
126	900	983	917.933	6	AGT	IL6	VEGFA	INS	EDN1	FOS*		
127	905	984	929.533	6	TNF	IL6	EDN1	VEGFA	PTGS2	FOS*		
128	903	993	932.8	6	TNF	IL6	IL1A	VEGFA	PTGS2	FOS*		
129	904	993	937.333	6	TNF	IL6	IL1A	VEGFA	TGFB1	FOS*		
130	900	983	916.6	6	AGT	IL6	VEGFA	STAT3	INS	FOS*		
131	900	999	931.067	6	TNF	IL6	IL1A	TNFRSF1A	NOS2A	IL8*		
132	917	994	942.467	6	TNF	IL6	TLR1	TLR2	TLR4	TLR9*		
133	900	999	937	6	TNF	IL6	IL1A	TNFRSF1A	ICAM1	RELA*		
134	900	993	921.667	6	TNF	IL6	IL1A	VEGFA	CCL2*	LEP		
135	900	983	920	6	TNF	IL6	EDN1	JUN*	INS	LEP		
136	900	983	925.867	6	TNF	IL6	INS	JUN*	STAT3	LEP		
137	903	993	934.933	6	TNF	IL6	IL1A	JUN*	STAT3	LEP		
138	900	964	916.067	6	TNF	IL6	INS	SOCS3*	STAT3	LEP		
139	900	993	924.933	6	TNF	IL6	IL1A	SOCS3*	STAT3	LEP		
140	903	999	928.733	6	TNF	VCAM1	NOS2A	IL1A	TNFRSF1A	JUN*		
141	903	999	937.067	6	TNF	IL6	IL1A	TNFRSF1A	NOS2A	JUN*		

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
142	909	993	932.333	6	TNF	IL6	IL1A	TLR2	TLR4	TRAF6*		
143	904	993	919.133	6	TNF	VCAM1	NOS2A	IL1A	CD40	VEGFA		
144	904	993	923	6	TNF	VCAM1	NOS2A	IL1A	IL18*	VEGFA		
145	900	993	929.8	6	TNF	IL6	IL1A	TIMP1	TGFB1	MMP1*		
146	900	993	925.333	6	TNF	IL6	IL1A	VEGFA	TGFB1	MMP1*		
147	917	999	951.467	6	TNF	IL6	TLR1	TLR2	TLR4	MYD88*		
148	903	993	930.4	6	TNF	IL6	IL1A	JUN*	PTGS2	NOS2A		
149	904	993	936	6	TNF	IL6	IL1A	IFNG*	TGFB1	NOS2A		
150	904	993	935.067	6	TNF	IL6	IL1A	IL10*	TGFB1	NOS2A		
151	903	993	934.867	6	TNF	IL6	IL1A	JUN*	TGFB1	NOS2A		
152	904	993	928.2	6	TNF	IL6	IL1A	VEGFA	IL18*	NOS2A		
153	903	993	934.533	6	TNF	IL6	IL1A	JUN*	CSF2	NOS2A		
154	900	993	925.267	6	TNF	IL6	IL1A	VEGFA	MAPK8*	NOS2A		
155	915	999	948.333	6	TNF	IL6	IL1A	MYD88*	TLR2	TLR4		
156	900	999	934.933	6	TNF	IL6	IL1A	TNFRSF1A	IL8*	TLR4		
157	909	999	940.133	6	TNF	IL6	IL1A	TNFRSF1A	TRAF6*	TLR4		
158	900	964	916.533	6	TNF	IL6	INS	VEGFA	STAT3	FAS1*		
159	903	993	926.467	6	TNF	IL6	IL1A	VEGFA	STAT3	FAS1*		
160	900	964	914.533	6	TNF	IL6	INS	VEGFA	ICAM1	FAS1*		
161	917	994	939.6	6	TNF	IL6	TLR1	TLR2	TLR4	TLR7*		
162	900	999	932.267	6	TNF	VCAM1	NOS2A	IL1A	TNFRSF1A	MAPK8*		
163	900	982	914.4	6	TNF	IL6	INS	VEGFA	SERPINE1	MAPK8*		
164	900	982	921.333	6	TNF	IL6	INS	VEGFA	STAT3	MAPK8*		
165	900	993	920.867	6	TNF	VCAM1	NOS2A	IL1A	VEGFA	MAPK8*		
166	900	999	936.667	6	TNF	IL6	IL1A	TNFRSF1A	NOS2A	MAPK8*		
167	903	993	924.867	6	TNF	IL6	IL1A	VEGFA	PTGS2	BCL2*		
168	900	964	920	5	TNF	IL6	TLR1	ICAM1	CD4*			
169	900	926	912.1	5	TNF	NOS3	VEGFA	INS	EDN1			
170	905	999	949.1	5	TNF	IKBKB*	TLR4	IL1A	TNFRSF1A			
171	901	999	924.9	5	TNF	VCAM1	NOS2A	IL1B*	TNFRSF1A			
172	906	972	924.1	5	AGT	IL6	JUN*	EDN1	PTGS2			
173	915	930	921.2	5	AGT	NOS3	VEGFA	EDN1	PTGS2			
174	902	925	912.8	5	AGT	NOS3	VEGFA	MAPK3*	PTGS2			
175	903	993	932	5	TNF	IKBKB*	TLR4	IL1A	PTGS2			
176	903	993	929.1	5	TNF	IL6	IL1A	CEBPB*	PTGS2			
177	907	984	929.6	5	TNF	IL6	TP53*	VEGFA	PTGS2			
178	904	964	919.5	5	TNF	IL6	EGFR*	VEGFA	PTGS2			

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
179	902	981	920.5	5	TNF	MAPK3*	TLR2	NOS2A	PTGS2			
180	900	992	927.1	5	TNF	IL6	IL17*	NOS2A	PTGS2			
181	902	981	924.2	5	TNF	MAPK3*	TLR2	TLR4	PTGS2			
182	900	920	907.3	5	FGFB*	IL6	VEGFA	INS	MMP9			
183	900	996	926.3	5	TNF	SP1*	TGFB1	MMP2	TIMP1			
184	900	964	917.5	5	TNF	IL6	EDN1	VEGFA	MMP2			
185	900	991	914.1	5	A2M*	IL6	IL1A	SERPINE1	TGFB1			
186	900	992	937.8	5	TNF	IL6	IL17*	ICAM1	TGFB1			
187	903	991	925	5	TNF	IL6	EGFR*	VEGFA	TGFB1			
188	900	992	939.4	5	TNF	IL6	IL17*	NOS2A	TGFB1			
189	900	993	923.9	5	TNF	IL6	IL1A	MMP3	SERPINE1			
190	900	983	923.2	5	TNF	IL6	INS	JUN*	SERPINE1			
191	900	964	920.1	5	TNF	IL6	IGF1	VEGFA	SERPINE1			
192	900	927	914.4	5	AGT	IL6	VEGFA	PTGS2	CCL2*			
193	900	927	910.5	5	AGT	IL6	VEGFA	ICAM1	CCL2*			
194	900	993	929.9	5	TNF	IL6	IL1A	MMP3	CCL2*			
195	910	994	939.6	5	TNF	IL6	TLR1	TLR2	IL2*			
196	900	964	926.2	5	TNF	IL6	TLR1	ICAM1	IL2*			
197	900	987	928.8	5	TNF	IL6	TLR1	ICAM1	IFNG*			
198	911	987	929.5	5	TNF	IL15	TLR2	NOS2A	IFNG*			
199	900	964	924	5	TNF	IL6	TLR1	ICAM1	IL4*			
200	911	951	924.6	5	TNF	IL15	TLR2	NOS2A	IL4*			
201	900	930	913.2	5	AGT	NOS3	VEGFA	EDN1	INS			
202	900	923	906.9	5	AGT	NOS3	VEGFA	MAPK3*	INS			
203	900	972	922.8	5	AGT	IL6	JUN*	STAT3	INS			
204	900	931	914.8	5	AGT	IL6	SOCS3*	STAT3	INS			
205	900	999	952.5	5	IRS2*	INSR	LEP	IRS1	INS			
206	900	997	947	5	APOB	APOE	LPL	INS	LDLR			
207	978	998	982.8	5	APOA4	APOE	APOB	LPL	APOC4*			
208	900	930	918.6	5	HIF1A*	VEGFA	EDN1	PTGS2	AGT			
209	904	991	922.6	5	FGFB*	IL6	VEGFA	TGFB1	AGT			
210	900	930	912.2	5	HIF1A*	VEGFA	EDN1	INS	AGT			
211	900	927	910.3	5	FGFB*	IL6	VEGFA	INS	AGT			
212	905	962	925.1	5	TNF	IL15	TLR2	NOS2A	IL10*			
213	927	999	972.8	5	FGA	FGB *	FGG *	ITGA2B	ITGB3			
214	900	918	902.3	5	PPARA	INS	ADIPOQ	LEP	UCP1*			
215	900	981	914.8	5	TNF	NOS3	VEGFA	INS	MAPK3*			

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
216	900	991	927.2	5	APP*	SERPINE1	IL6	TGFB1	IL1A			
217	901	999	932	5	TNF	CASP1*	TNFRSF1A	TLR4	IL1A			
218	915	997	947.8	5	TNF	IRAK1*	TLR2	TLR4	IL1A			
219	903	993	931.4	5	TNF	IL6	IL1A	CSF3*	STAT3			
220	903	993	938.2	5	TNF	IL6	IL1A	IL2*	STAT3			
221	903	993	941.1	5	TNF	IL6	IL1A	IFNG*	STAT3			
222	900	997	923.7	5	TNF	MAPK3*	VEGFA	INS	STAT3			
223	900	997	915.9	5	AGT	MAPK3*	VEGFA	INS	STAT3			
224	909	998	924.1	5	JAK2*	IGF1	LEP	IL6	STAT3			
225	903	993	940.2	5	TNF	IL6	IL1A	IL10*	STAT3			
226	903	993	933.5	5	TNF	IL6	IL1A	IL2RA*	STAT3			
227	903	997	930.3	5	TNF	MAPK3*	VEGFA	IGF1	STAT3			
228	900	993	928.9	5	TNF	IL6	IL1A	CD4*	ICAM1			
229	900	999	928.9	5	TNF	IL6	IL1B*	TNFRSF1A	ICAM1			
230	900	999	925.9	5	TNF	IL6	TP53*	TNFRSF1A	ICAM1			
231	900	999	933.8	5	TNF	IL6	STAT1*	TNFRSF1A	ICAM1			
232	900	991	924.2	5	AGT	IL6	JUN*	TGFB1	ICAM1			
233	900	991	920.2	5	AGT	IL6	VEGFA	TGFB1	ICAM1			
234	900	923	904.3	5	AGT	MAPK3*	VEGFA	INS	ICAM1			
235	900	993	921.5	5	TNF	IL6	IL1A	CD8A*	ICAM1			
236	900	964	918.2	5	TNF	IL6	SYT1*	CSF2	ICAM1			
237	900	964	924.9	5	TNF	IL6	IL1B*	CSF2	ICAM1			
238	900	981	927.8	5	TNF	MAPK3*	VEGFA	CSF2	ICAM1			
239	900	993	924.2	5	TNF	IL6	IL1A	VEGFA	FGF7*			
240	907	984	925.5	5	AGT	IL6	VEGFA	PTGS2	TP53*			
241	903	996	924.1	5	ACE	AGT	AGTR1	NPPA	ENSP00000272190*			
242	904	927	916.8	5	AGT	IL6	VEGFA	PTGS2	EGFR*			
243	903	991	921.9	5	AGT	IL6	VEGFA	TGFB1	EGFR*			
244	900	927	915.5	5	AGT	IL6	VEGFA	PTGS2	CD40			
245	900	927	911.6	5	AGT	IL6	VEGFA	ICAM1	CD40			
246	909	938	920.7	5	TNF	IL15	TLR2	NOS2A	CD40			
247	925	993	940.4	5	TNF	IL6	IL1A	TLR4	IL18*			
248	978	992	982.3	5	APOA4	APOE	APOB	LPL	APOA2*			
249	900	950	918.5	5	KITLG*	IL6	VEGFA	ICAM1	CSF2			
250	909	993	936.7	5	TNF	IL6	IL1A	TLR3*	CSF2			
251	902	981	930.4	5	TNF	MAPK3*	TLR2	NOS2A	CSF2			
252	903	981	930.5	5	TNF	MAPK3*	VEGFA	NOS2A	CSF2			

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
253	900	981	932.9	5	TNF	MAPK3*	TLR2	TLR4	CSF2			
254	900	999	932.9	5	TNF	IL6	IL1A	TIMP1	MMP3			
255	903	999	941.2	5	IRS2*	INSR	LEP	IRS1	IGF1			
256	900	999	951.7	5	F11	F9	GP1BA	F2	GP9*			
257	900	993	930.8	5	TNF	IL6	IL1A	VEGFA	CXCL10*			
258	905	991	931.2	5	AGT	IL6	VEGFA	TGFB1	FOS*			
259	900	996	926.9	5	ACE	AGT	AGTR1	NPPA	FOS*			
260	900	993	928	5	TNF	IL6	IL1A	SAA1	IL8*			
261	900	997	923.9	5	TNF	LDLR	INS	APOE	LPL			
262	900	921	906.1	5	TNF	ADIPOQ	INS	LEP	LPL			
263	900	918	902.1	5	PPARA	INS	ADIPOQ	LEP	UCP2*			
264	900	993	935.9	5	TNF	IL6	IL1A	IL1RN*	LEP			
265	904	983	921.3	5	TNF	VCAM1	NOS2A	EDN1	JUN*			
266	900	990	924.5	5	TNF	IRS1	INS	LEP	JUN*			
267	904	933	917.4	5	TNF	VCAM1	NOS2A	EDN1	VEGFA			
268	900	993	927.5	5	TNF	CD44*	IL1A	MMP9	VEGFA			
269	900	984	918.5	5	TNF	SP1*	TGFB1	MMP2	VEGFA			
270	900	926	910.7	5	TNF	SP1*	TGFB1	SERPINE1	VEGFA			
271	900	926	907.1	5	TNF	SP1*	INS	SERPINE1	VEGFA			
272	900	993	921.1	5	TNF	BMP2*	PTGS2	IL1A	VEGFA			
273	900	993	923.4	5	TNF	VCAM1	CD44*	IL1A	VEGFA			
274	906	993	931.2	5	TNF	VCAM1	IL13*	IL1A	VEGFA			
275	904	989	923.2	5	THBS1	TGFB1	MMP9	FGFB*	VEGFA			
276	902	984	927.9	5	THBS1	TGFB1	MMP2	FGFB*	VEGFA			
277	900	999	957.6	5	F11	F9	GP1BA	F2	GP5*			
278	900	956	911.5	5	TNF	ADIPOQ	INS	LEP	SLC2A4			
279	901	999	931	5	TNF	IL6	IL1B*	TNFRSF1A	NOS2A			
280	907	999	936.4	5	TNF	IL6	STAT1*	TNFRSF1A	NOS2A			
281	900	924	913.9	5	HIF1A*	VEGFA	EDN1	PTGS2	NOS2A			
282	903	929	916.1	5	TNFSF11*	IL6	IL1A	PTGS2	NOS2A			
283	900	964	920.8	5	TNF	IL6	SYT1*	CSF2	NOS2A			
284	903	964	927.1	5	TNF	IL6	IL1B*	CSF2	NOS2A			
285	900	968	916.3	5	TNF	NOS3	VEGFA	INS	SP1*			
286	900	997	916.1	5	TNF	LDLR	INS	APOE	SP1*			
287	900	999	929.6	5	LEPR	STAT3	INS	LEP	SOCS3*			
288	900	999	928.1	5	TNF	IRS1	INS	LEP	SOCS3*			
289	900	999	950.5	5	INSR	INS	IRS1	LEP	SOCS3*			

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
290	900	999	934.1	5	TNF	IL6	IL1B*	TNFRSF1A	TLR4			
291	903	929	920.2	5	TNFSF11*	IL6	IL1A	PTGS2	TLR4			
292	916	964	928.4	5	TNF	IL6	IFNB1*	TLR2	TLR4			
293	900	964	921	5	TNF	IL6	RNF36*	TLR2	TLR4			
294	900	964	927.8	5	TNF	IL6	IL1B*	CSF2	TLR4			
295	900	999	950.6	5	INSR	INS	IRS1	LEP	PTPN1*			
296	923	994	970.3	5	APOA4	APOE	APOB	LPL	ENSP00000352471*			
297	900	991	953.2	5	APOB	APOE	LPL	INS	ENSP00000353540*			
298	978	991	982.2	5	APOA4	APOE	APOB	LPL	ENSP00000353540*			
299	920	997	960.6	5	TNF	IRAK1*	TLR2	TLR4	TLR1			
300	901	999	941.667	4	CD36	ITGA2B	ITGB3	CD9				
301	907	969	926.333	4	AGT	CTGF*	VEGFA	EDN1				
302	900	999	935.333	4	TNF	CASP3*	NOS2A	TNFRSF1A				
303	907	964	922.667	4	TNF	IL6	CREB1*	PTGS2				
304	903	929	912.333	4	CDKN1A*	IL6	IL1A	PTGS2				
305	903	993	937	4	TNF	PLA2G4A*	IL1A	PTGS2				
306	902	964	919.833	4	TNF	IL6	BCL2L1*	PTGS2				
307	902	983	924.833	4	OSM*	IL6	VEGFA	PTGS2				
308	904	922	915.333	4	MCL1*	IL6	VEGFA	PTGS2				
309	915	926	918.333	4	TGFA*	IL6	VEGFA	PTGS2				
310	933	976	959.833	4	PTGES2*	PTGIS	TBXAS1	PTGS2				
311	913	927	919.833	4	AGT	IL6	VEGFA	HMOX1				
312	910	983	932.833	4	OSM*	IL6	TIMP1	MMP9				
313	906	974	922.833	4	TNF	PLAU*	TGFB1	MMP9				
314	900	909	902.5	4	SRC*	VEGFA	INS	MMP9				
315	900	929	916.333	4	TNFSF11*	IL6	IL1A	MMP9				
316	902	983	922.333	4	OSM*	IL6	VEGFA	MMP9				
317	909	931	918.333	4	TNF	CXCL12*	VEGFA	MMP9				
318	915	934	924.167	4	AGT	NPPA	EDN1	AVP*				
319	971	999	988.667	4	F3	F10	F7	F9				
320	900	989	940.833	4	THBS1	TGFB1	MMP9	TIMP1				
321	900	996	954.167	4	THBS1	TGFB1	MMP2	TIMP1				
322	906	996	936.333	4	TNF	MMP14*	TIMP1	MMP2				
323	906	984	933.5	4	TNF	PLAU*	TGFB1	MMP2				
324	905	969	925.667	4	TNF	CXCL12*	VEGFA	MMP2				
325	904	983	922	4	TNF	MMP14*	VEGFA	MMP2				
326	900	925	912.833	4	TNF	EGR1	TIMP1	TGFB1				

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
327	900	927	912	4	AGT	EGR1	TIMP1	TGFB1				
328	909	991	928.333	4	AGT	IL6	TIMP1	TGFB1				
329	900	969	925.333	4	CTGF*	VEGFA	SERPINE1	TGFB1				
330	904	927	911.5	4	FGFB*	EGR1	AGT	TGFB1				
331	905	991	925.5	4	CDKN1A*	IL6	IL1A	TGFB1				
332	900	991	929.833	4	TNF	IL6	ITGA5*	TGFB1				
333	905	969	931.167	4	AGT	CTGF*	VEGFA	TGFB1				
334	905	991	929.667	4	TGFA*	IL6	VEGFA	TGFB1				
335	900	964	920.167	4	TNF	IL6	INS	CD79A*				
336	905	999	925	4	TNF	PLAU*	TGFB1	SERPINE1				
337	900	983	920	4	OSM*	IL6	MMP3	SERPINE1				
338	900	999	925.667	4	TNF	PLAU*	IGF1	SERPINE1				
339	900	983	919.333	4	OSM*	IL6	VEGFA	SERPINE1				
340	900	971	940.833	4	PTGIS	TBXAS1	PTGS2	PTGDS*				
341	900	972	944.667	4	PTGIS	TBXAS1	PTGS1	PTGDS*				
342	900	999	962.833	4	PLAUR*	SERPINE1	SERPINE2	VTN				
343	900	999	952.833	4	PLG*	SERPINE1	SERPINE2	VTN				
344	906	991	937.833	4	TNF	EGR1	TGFB1	IL2*				
345	924	960	937.333	4	TNF	IL15	TLR2	IL2*				
346	906	960	927.5	4	TNF	IL15	CX3CR1	IL2*				
347	907	993	939.167	4	TNF	SELE	IL1A	IFNG*				
348	912	964	937.667	4	TNF	IL6	TNFRSF11B	IL4*				
349	971	994	983.667	4	F10	F9	F7	GGCX*				
350	934	990	974	4	F10	F9	F2	GGCX*				
351	900	925	907.5	4	TNF	EGR1	INS	CREB1*				
352	909	964	923.333	4	TNF	IL6	IGF1	CREB1*				
353	900	925	910.333	4	TNF	MMP14*	TIMP1	EGR1				
354	900	922	909.667	4	ENSP00000265171*	TIMP1	TGFB1	EGR1				
355	900	925	909.833	4	TNF	LDLR	TGFB1	EGR1				
356	900	925	904.667	4	TNF	LDLR	INS	EGR1				
357	900	925	907.833	4	TNF	PTEN*	INS	EGR1				
358	900	999	948.667	4	VTN	SERPINE1	TGFB1	PLAU*				
359	9999	999	941.667	4	TNF	SERPINE2	SERPINE1	PLAU*				
360	900	999	955	4	VTN	SERPINE1	SERPINE2	PLAU*				
361	900	999	948	4	INSR	INS	IRS1	PI3*				
362	900	999	937.833	4	INSR	IGF1	IRS1	PI3*				
363	905	933	916.833	4	TNF	VCAM1	NOS2A	IRF1*				

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
364	900	914	903.833	4	TNF	RETN*	EDN1	INS				
365	900	907	902.833	4	HIF1A*	SLC2A1	EDN1	INS				
366	900	964	914.5	4	TNF	IL6	CREB1*	INS				
367	900	927	906	4	FGFB*	EGR1	AGT	INS				
368	900	920	905	4	TNF	ENSP00000302150*	STAT3	INS				
369	900	944	911.333	4	ERBB2*	VEGFA	STAT3	INS				
370	900	990	918.333	4	TNF	PI3*	IRS1	INS				
371	900	991	923	4	CETP	APOE	LPL	INS				
372	900	997	962.5	4	APOB	APOE	LPA	LDLR				
373	907	928	916.667	4	KITLG*	IL6	VEGFA	EPO				
374	900	990	940.833	4	APOA4	APOE	APOB	SDC1*				
375	904	998	936.667	4	ECE1	EDNRA	EDN1	AGT				
376	900	923	915.667	4	HIF1A*	VEGFA	HMOX1	AGT				
377	900	998	922.5	4	EDNRA	EDN1	INS	AGT				
378	909	925	916	4	ENSP00000337459*	PTGS2	NOS3	AGT				
379	900	972	915.167	4	AGTR2*	INS	NOS3	AGT				
380	923	927	911.667	4	IFI44*	IL6	VEGFA	AGT				
381	917	964	941	4	TNF	IL6	HMOX1	IL10*				
382	905	962	920.667	4	TNF	IL15	CX3CR1	IL10*				
383	905	964	928.833	4	TNF	IL6	IL23A*	TLR2				
384	904	933	913.833	4	TNF	VCAM1	NOS2A	SYT1*				
385	900	999	946.667	4	GP1BA	F2	F9	VWF*				
386	994	999	997.333	4	TFPI	F3	F10	F7				
387	900	981	929.5	4	TNF	EGR1	INS	MAPK3*				
388	900	971	917.5	4	AGT	EGR1	INS	MAPK3*				
389	900	994	947.5	4	TNF	IRS1	INS	MAPK3*				
390	907	997	939.667	4	AGTR1	STAT3	AGT	MAPK3*				
391	902	996	927.667	4	AGTR1	NOS3	AGT	MAPK3*				
392	923	981	954	4	TNF	EGR1	CSF2	MAPK3*				
393	905	994	950.833	4	ESR1	IRS1	IGF1	MAPK3*				
394	905	994	952.333	4	TNF	IRS1	IGF1	MAPK3*				
395	903	991	925.833	4	ESR1	VEGFA	IGF1	MAPK3*				
396	900	999	977.667	4	INSR	INS	IRS1	MAPK3*				
397	905	999	968.333	4	INSR	IGF1	IRS1	MAPK3*				
398	905	999	951.833	4	TNF	CHUK*	TNFRSF1A	IL1A				
399	900	993	928.333	4	TNF	TNFAIP6*	PTGS2	IL1A				
400	902	993	925	4	TNF	STAT6*	PTGS2	IL1A				

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
401	900	999	932.167	4	VTN	SERPINE1	TGFB1	IL1A				
402	900	993	929.333	4	TNF	VCAM1	CSF3*	IL1A				
403	900	993	920.833	4	TNF	CCL11	ICAM1	IL1A				
404	902	993	926	4	TNF	VCAM1	CCL11	IL1A				
405	900	931	917.5	4	CRH*	IL6	LEP	IL1A				
406	900	967	924.667	4	IRAK2*	TLR2	TLR4	IL1A				
407	915	997	955.167	4	TOLLIP*	TLR2	TLR4	IL1A				
408	908	992	945.5	4	IRAK4*	TLR2	TLR4	IL1A				
409	900	993	940.167	4	TNF	IL6	IL1A	IL11*				
410	909	964	927.833	4	TNF	IL6	IL23A*	STAT3				
411	914	964	927.333	4	TNF	IL6	IRF1*	STAT3				
412	908	964	926.167	4	TNF	IL6	LIF*	STAT3				
413	900	986	917	4	SRC*	VEGFA	INS	STAT3				
414	910	999	930.333	4	JAK1*	IGF1	IL6	STAT3				
415	909	928	915	4	SOCS1*	LEP	IL6	STAT3				
416	903	964	921.167	4	TNF	IL6	SYT1*	STAT3				
417	903	952	921.333	4	CDKN1A*	IL6	IL1A	STAT3				
418	900	929	909.667	4	A2M*	IL6	IL1A	STAT3				
419	920	999	948.833	4	TNF	IL6	IL6R*	STAT3				
420	908	967	921.167	4	TNF	CCND1*	IGF1	STAT3				
421	902	983	925.333	4	OSM*	IL6	VEGFA	STAT3				
422	908	922	915.833	4	MCL1*	IL6	VEGFA	STAT3				
423	914	992	938.5	4	TNF	IL6	IL17*	STAT3				
424	919	995	940	4	TNF	IL6	STAT1*	STAT3				
425	900	999	934.167	4	TNF	TNFSF12*	TNFRSF1A	ICAM1				
426	900	918	906.5	4	CD36	CCL2*	IL6	ICAM1				
427	900	950	916.833	4	CD36	IL4*	IL6	ICAM1				
428	900	918	904.5	4	CD36	INS	IL6	ICAM1				
429	900	997	927.5	4	TNF	ITGAM*	CSF2	ICAM1				
430	900	964	920.5	4	TNF	IL6	IFNB1*	ICAM1				
431	900	994	945.833	4	F10	F9	F7	FURIN*				
432	900	982	937.5	4	F10	F9	F2	FURIN*				
433	900	984	925	4	IGF2	VEGFA	PTGS2	TP53*				
434	900	927	912.167	4	TNF	EGR1	INS	TP53*				
435	900	927	912.333	4	AGT	EGR1	INS	TP53*				
436	937	990	960.333	4	APOA4	APOE	APOB	HSPG2*				
437	903	925	911.833	4	TNF	EGR1	TGFB1	EGFR*				

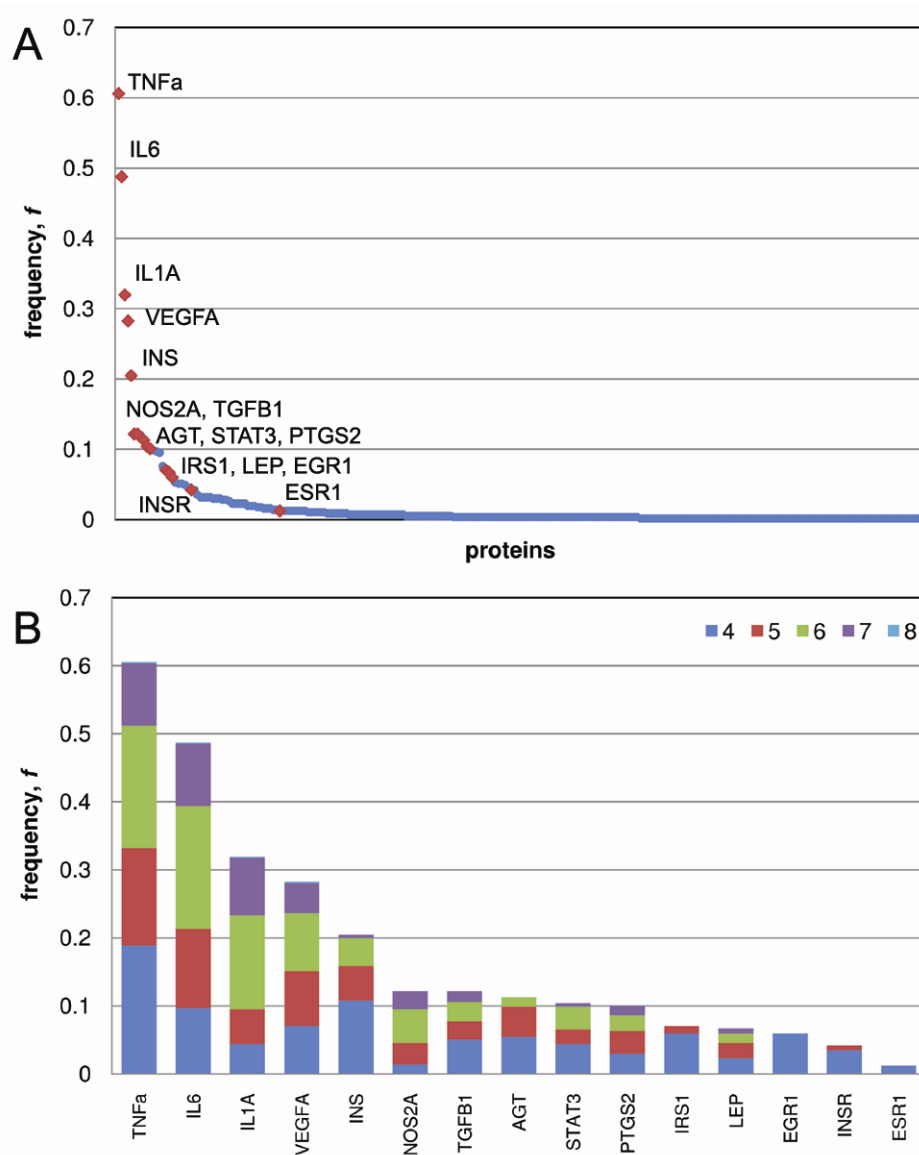
module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
438	903	927	913.667	4	AGT	EGR1	TGFB1	EGFR*				
439	900	925	906.833	4	TNF	EGR1	INS	EGFR*				
440	900	927	909.333	4	AGT	EGR1	INS	EGFR*				
441	900	990	926.833	4	TNF	IRS1	INS	EGFR*				
442	917	996	944.333	4	AGTR1	STAT3	AGT	EGFR*				
443	906	992	939.833	4	ESR1	IRS1	IGF1	EGFR*				
444	904	992	931.833	4	TNF	IRS1	IGF1	EGFR*				
445	906	971	924.167	4	ESR1	VEGFA	IGF1	EGFR*				
446	900	993	926.333	4	TNF	SELE	IL1A	CD44*				
447	910	964	932.167	4	TNF	IL6	TNFRSF11B	IL18*				
448	900	992	953	4	CETP	APOE	LPL	APOA2*				
449	909	993	938.833	4	TNF	IL6	IL1A	REL*				
450	900	971	944.5	4	PTGIS	TBXAS1	PTGS2	PTGDS2*				
451	900	972	945.667	4	PTGIS	TBXAS1	PTGS1	PTGDS2*				
452	900	948	913	4	TNF	APOE	INS	ALB*				
453	900	944	915.333	4	TNF	EGR1	CSF2	IL3*				
454	923	960	936.333	4	TNF	EGR1	IL2*	CSF2				
455	900	944	918	4	TNF	EGR1	SYT1*	CSF2				
456	900	998	926.667	4	TNF	ITGB2*	ICAM1	CSF2				
457	900	944	918.5	4	TNF	CTLA4*	ICAM1	CSF2				
458	900	944	918.167	4	TNF	CD86*	ICAM1	CSF2				
459	915	991	935.5	4	CAV1*	VEGFA	PTGS2	NOS3				
460	907	996	931	4	ACE	AGT	AGTR1	NOS3				
461	900	972	927.833	4	ACE	AGT	AGTR2*	NOS3				
462	902	999	970.5	4	PROC*	F2	THBD	SERPINA5				
463	934	997	966.667	4	PROC*	F2	PROS1	SERPINA5				
464	900	999	935.333	4	OSM*	IL6	TIMP1	MMP3				
465	900	992	931.667	4	TNF	IL6	IL17*	MMP3				
466	917	938	925.5	4	TNF	IL15	TLR2	IFNB1*				
467	900	922	910.833	4	TNF	ENSP00000302150*	STAT3	IGF1				
468	900	992	922.333	4	TNF	PI3*	IRS1	IGF1				
469	916	929	922.667	4	TGFA*	IL6	VEGFA	IGF1				
470	900	996	951.5	4	F12	F11	GP1BA	GP9*				
471	903	992	939.333	4	JAK2*	IGF1	ESR1	IRS1				
472	903	999	955.333	4	IGF1R*	IGF1	ESR1	IRS1				
473	903	992	926.5	4	FOXO1A*	IGF1	ESR1	IRS1				
474	900	990	931.5	4	TNF	PTK2*	INS	IRS1				

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
475	920	999	965.833	4	ENSP00000233668*	INS	INSR	IRS1				
476	990	999	948	4	PLEK*	INS	INSR	IRS1				
477	932	999	969.333	4	GRB14*	INS	INSR	IRS1				
478	990	999	960.833	4	AKT1*	INS	INSR	IRS1				
479	990	999	981	4	PIK3R1*	INS	INSR	IRS1				
480	990	999	971.667	4	HRAS*	INS	INSR	IRS1				
481	990	999	980.667	4	PTPN11*	INS	INSR	IRS1				
482	990	999	966	4	FRAP1*	INS	INSR	IRS1				
483	906	999	952.667	4	AKT1*	IGF1	INSR	IRS1				
484	909	992	940	4	JAK2*	IGF1	LEP	IRS1				
485	900	999	952.5	4	INSR	SOCS1*	LEP	IRS1				
486	900	964	916.5	4	TNF	IL6	INS	CEBPB*				
487	916	934	925.667	4	AGT	NPPA	EDN1	FOS*				
488	906	984	927.833	4	TNF	EGR1	TGFB1	FOS*				
489	AGT	FOS	9 AT3	4	AGT	EGR1	TGFB1	FOS*				
490	918	984	935.667	4	TNF	EGR1	INS	FOS*				
491	975	999	987.5	4	AGT	EGR1	INS	FOS*				
492	900	904	901.167	4	AGTR1	STAT3	AGT	FOS*				
493	932	972	947.5	4	TNF	EGR1	CSF2	FOS*				
494	900	971	911.833	4	FGA	FGB *	FGG *	F2				
495	909	999	964	4	UCP3*	INS	LEP	LPL				
496	912	992	930.667	4	EPHX1*	GSTT1	CYP1A1	GSTM1				
497	912	967	932.667	4	GHRL*	INS	GCG	LEP				
498	900	999	917.667	4	JAK2*	LEPR	STAT3	LEP				
499	900	904	901	4	TNF	IRS1	IGF1	LEP				
500	903	999	946	4	TNF	IL6	CRP	LEP				
501	929	999	957.333	4	INSR	INS	SLC2A4	LEP				
502	914	934	924	4	PPARA	INS	UCP3*	LEP				
503	905	989	931	4	GHR*	INS	IRS1	GH1				
504	906	983	936.333	4	GHR*	IGF1	IRS1	GH1				
505	906	973	924.833	4	AGT	NPPA	EDN1	JUN*				
506	900	983	930.167	4	THBS1	TGFB1	MMP9	JUN*				
507	900	973	919.333	4	TNF	EGR1	TGFB1	JUN*				
508	917	983	944.167	4	AGT	EGR1	TGFB1	JUN*				
509	913	964	926.667	4	TNF	EGR1	INS	JUN*				
510	903	926	911.5	4	AGT	EGR1	INS	JUN*				

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
511	900	968	918	4	TNF	EGR1	CSF2	JUN*				
512	905	999	920.5	4	TNF	IL6	HMOX1	VEGFA				
513	905	968	931.667	4	TNF	MAP2K1*	MMP9	VEGFA				
514	900	926	906.167	4	THBS1	TP53*	MMP2	VEGFA				
515	900	926	907.833	4	SMAD3*	SERPINE1	TGFB1	VEGFA				
516	900	926	908	4	THBS1	TGFB1	SPARC*	VEGFA				
517	906	956	921.333	4	TNF	ALB*	INS	VEGFA				
518	900	983	923	4	TNF	PTEN*	INS	VEGFA				
519	900	999	920.5	4	TNF	PTK2*	INS	VEGFA				
520	900	926	912.667	4	TNF	CXCR4*	STAT3	VEGFA				
521	908	977	932.833	4	RAC1*	AGT	STAT3	VEGFA				
522	900	996	950.167	4	AKT1*	INS	NOS3	VEGFA				
523	900	999	931.167	4	TNF	CASP3*	NOS2A	VEGFA				
524	900	999	942.333	4	TNF	TNFRSF11A*	CSF1	VEGFA				
525	900	904	901.5	4	F12	F11	GP1BA	GP5*				
526	900	991	959	4	AKT1*	INS	INSR	SLC2A4				
527	911	964	925.333	4	PIK3R1*	INS	INSR	SLC2A4				
528	911	938	922	4	UCP3*	INS	LEP	SLC2A4				
529	909	917	912.833	4	APOB	APOE	LPL	VLDLR				
530	911	920	907.167	4	TNF	IL6	IRF1*	NOS2A				
531	910	929	921.167	4	TNF	IL15	IRF1*	NOS2A				
532	910	993	940	4	ENSP00000337459*	PTGS2	NOS3	NOS2A				
533	924	998	963.333	4	IFI44*	IL6	VEGFA	NOS2A				
534	900	921	908.833	4	TNFSF11*	IL6	IL1A	CSF1				
535	900	971	934.833	4	TNF	PLA2G4A*	IL1A	CSF1				
536	900	999	922.333	4	LRP8	VLDLR	APOE	DAB1*				
537	901	999	970.333	4	TNF	LDLR	TGFB1	SP1*				
538	990	999	995.667	4	PTPN11*	INS	STAT3	LEPR				
539	909	999	972	4	NPY*	INS	LEP	LEPR				
540	900	993	933.5	4	ITGA2B	VTN	ITGB3	FGG *				
541	926	999	966	4	INSR	INS	IRS1	SHC1*				
542	900	982	926.167	4	INSR	IGF1	IRS1	SHC1*				
543	957	975	968.167	4	TNF	IL6	IL1A	MMP13*				
544	957	975	968.333	4	LRP8	VLDLR	APOE	RELN*				
545	923	999	972.333	4	PPARA	INS	ADIPOQ	ADIPOR1				
546	912	938	923.833	4	PTGIS	TBXAS1	PTGS2	PTGES*				
547	938	967	938.833	4	PTGIS	TBXAS1	PTGS1	PTGES*				

module#	CS _{min}	CS _{max}	CS _{avg}	size	member1	member2	member3	member4	member5	member6	member7	member8
548	938	999	978.333	4	TNF	RIPK1*	TNFRSF1A	TLR4				
549	938	999	982.167	4	TNF	IRAK3*	TLR2	TLR4				
550	938	994	958.833	4	TNF	HMGB1*	TLR2	TLR4				
551	938	994	955.833	4	TIRAP*	TLR1	TLR2	TLR4				
552	938	994	966.833	4	LY96*	TLR1	TLR2	TLR4				
553	900	993	935	4	TLR6*	TLR1	TLR2	TLR4				
554	900	944	916	4	TLR8*	TLR1	TLR2	TLR4				
555	900	999	964.5	4	TLR10*	TLR1	TLR2	TLR4				
556	935	991	948	4	TNF	CD44*	IL1A	TLR4				
557	900	999	952.333	4	TNF	ITGAM*	CSF2	TLR4				
558	934	999	976.833	4	INSR	INS	IRS1	GRB2*				
559	900	982	917.833	4	CETP	APOE	LPL	ENSP00000352471*				
560	900	999	948.5	4	GP1BA	F2	F9	F8*				
561	933	976	960	4	F10	F9	F2	F8*				
562	944	998	986.167	4	TNF	EGR1	INS	MAPK8*				
563	938	994	979.833	4	TNF	IRS1	INS	MAPK8*				
564	900	993	925.964	4	PTGES2*	PTGIS	TBXAS1	PTGS1				
565	900	993	925.381	4	PROC*	F2	PROS1	F5				
566	900	993	920.857	4	IRAK4*	TLR2	TLR4	TLR1				

Additional File 6 - The distribution of the frequency of the occurrence of hub proteins in functional modules (A) The graph is presented in descending of appearance of proteins in functional modules from highest to lowest. The hub proteins are also labeled for visual inspection. **(B)** The self distribution of each hub protein according to the size of functional modules. i.e. TNFa is the member of 343 out of 566 functional modules ($f_{TNFa} = 0.606$) and 107, 81, 102, 52 and 1 of these functional modules have 4 to 8 members.



Additional File 7 – Complete List of Diseases and Associated Genes. This file contains the disease terms and associated genes that are obtained through incorporation of disease terms listed in Goh et. al. with the OMIM database gene pages. Each of the disease terms were searched in gene records deposited in OMIM database. The first column indicates the disease term search key, following by the gene symbols that are linked through this study.

Blood group	A1BG, A4GALT, ABO, ACHE, ACP1, AMY2A, APCS, APOA2, AQP1, AQP3, ART4, ASS1, B3GALNT1, B3GNT1, BCAM, BSG, C3, C4A, CD151, CD44, CD55, CLCN4, CR1, CYB5R3, DARC, DCC, ECE1, EDN3, EPB41, ERMAP, F11, FGR, FUCA1, FUK, FUT1, FUT2, FUT3, FUT5, FUT6, G6PD, GBT1, GCNT2, GJA8, GPR143, GYPA, GYPB, GYPC, GYPE, HLA-DRB1, ICAM4, IGDM, IGKC, KAL1, KEL, MUC1, NDP, PAEP, PGM1, PHEX, PIP, PRH1, RHAG, RHCE, RHCG, RHD, RP2, SEMA7A, SERPINC1, SLC14A1, SLC14A2, SLC4A1, SPTA1, STS, TCN2, TSTA3, VWF, XG, XK, XPA
Alzheimer	A2M, ABCA1, ABCA2, ACE, ACHE, ADAMTS5, ADAMTS6, ADAMTS7, ADRB2, AGER, APBA1, APBA2, APBA3, APBB1, APBB2, APBB3, APCS, APLP1, APLP2, APOC1, APOE, APP, APPBP2, AVP, B2M, BACE1, BACE2, BAX, BLMH, BPTF, C4A, CAPN2, CASP3, CAV1, CCR2, CD40, CD40LG, CDK5, CDK5R1, CHAT, CLU, CNTF, COL25A1, COMT, CP, CRAT, CRH, CRYAB, CST3, CTNNA3, CTNND2, CTSB, CTSG, CTSK, CYP19A1, CYP2A6, CYP46A1, DBN1, DHCR24, DIO1, DLL4, DLST, DSCR1, ECE1, ESR2, FAS, FHL2, FLNB, FOS, FPRL1, GAB2, GAL, GAPDH, GAPDHS, GBA, GFAP, GGA3, GLO1, GLUL, GSK3A, GSK3B, GSTO1, GYPA, HEPH, HERPUD1, HLA-A, HMOX1, HMOX2, HSD11B1, HSD17B10, HTATIP, HTR1A, HTR2A, HTR2C, IAPP, IDE, IGF1, IL1A, IL1B, INS, ITM2C, KCNIP3, KLK15, KLK6, LRP1, LRRTM3, MAPK10, MAPT, MEOX2, MME, MPO, MT3, MTNR1A, NCKAP1, NCSTN, NEFL, NGB, NNMT, NOS2A, NOTCH1, NRG1, NTRK1, OGDH, OLR1, P4HB, PARG, PAXIP1, PDE4D, PIN1, PLA2, PLCD1, PLD1, PRKCE, PRND, PRNP, PSEN1, PSEN2, PTGDS, RABGAP1L, RELN, RHOA, RNF103, ROCK1, RUFY2, S100B, SERPINA1, SERPINA3, SIL1, SIRT1, SLC17A7, SLC1A2, SNCA, SNCAIP, SNCB, SNCG, SOAT1, SOD2, SORBS1, SORL1, SST, TFCP2, TGFB1, TGFB2, THOP1, TRIM11, TRPM7, UBB, UBQLN1, UCHL1, UTP11L, VLDLR
HIV	A4GALT, ABCB1, ABCB11, ABCC4, ABCC5, ACADL, ACE2, ACOT8, ACTN4, AGTRL1, ANKHD1, APEX1, APLN, APOBEC3F, APOBEC3G, ATM, ATP6V1H, BAG1, BANF1, BCL6, BECN1, BRD4, BSG, BTRC, C1QBP, CAV1, CCL11, CCL2, CCL20, CCL3, CCL3L1, CCL4, CCL4L1, CCL5, CCL7, CCNT1, CCNT2, CCR2, CCR3, CCR5, CCR7, CCT4, CD1C, CD207, CD209, CD4, CD80, CDK9, CDKN1A, CDKN2A, CGB, CIITA, CLEC11A, CLEC4M, COMMD1, COPB1, CST3, CUL5, CX3CR1, CXCL12, CXCL9, CXCR4, CXCR6, DARC, DBH, DDX3X, DEFA1, DEFA3, DEFB103A, DEK, DHPS, DPP4, EED, EIF5B, ELA2, EMD, ERCC2, ERCC3, ERCC6, FASLG, FCER2, FLNB, FOXK2, FRAP1, GALNT6, GATA1, GC, GDF8, GOLGB1, HFE, HIVEP1, HIVEP2, HIVEP3, HLA-A, HLA-B, HLA-C, HLA-DQB1, HLA-DRB1, HLTF, HNRPU, HOXB4, HRB, HSPA1L, HTATIP, HTATIP2, HTATSF1, ICAM1, IFNGR1, IL10, IL4R, IL8RA, ISG15, KHDRBS1, KIR2DL1, KIR2DL2, KIR2DL3, KIR3DL1, LCK, LGALS1, LRRFIP1, LTF, M6PRBP1, MAP3K5, MBL2, MBP, MMP2, MSH2, MST1R, MTDH, MYCN, MYST3, NFE2, OSM, PACS1, PCAF, PDCD1, PDCD6IP, PLA2G4A, PML, PODN, PPIA, PRDX4, PSIP1, PSMC2, PSMC3, PSMC3IP, PURA, RASSF1, RNASEH1, SDC1, SDC2, SDC3, SDC4, SERPINA1, SH3KBP1, SIGLEC5, SLC6A8, SLC7A11, SMARCB1, SP110, SPN, SSTR2, TAL1, TARBP1, TARBP2, TARDBP, TCERG1, TCF4, TFCP2, TLR7, TLR8, TMF1, TNFRSF4, TNFSF10, TNFSF11, TNIP1, TP53, TPP2, TRIM22, TRIM32, TRIM5, TRPA1, TSC1, TSC2, TSG101, TXNRD1, UBP1, UCP1, VAV1, VPS37B, VPS37C, VPS4A, VPS4B, XPO1, ZBTB7A, ZNF175

Immunodeficiency	A4GALT, ACOT8, ADA, AIRE, AKAP8L, ALDOB, ANKHD1, APOBEC3F, APOBEC3G, ATP6V1H, BANF1, BCL6, BECN1, BIRC4, BLNK, BSG, BTK, C1QBP, CASP8, CAV1, CCL3L1, CCL5, CCR5, CCT4, CD1C, CD207, CD209, CD247, CD274, CD34, CD36, CD3D, CD3E, CD3G, CD4, CD40, CD40LG, CD44, CD7, CD70, CD80, CDK9, CDKN1A, CIITA, COL17A1, CTSC, CUL5, CXCL12, CXCR4, CXCR6, DCLRE1C, DDX3X, DEFA3, DEFB103A, DNMT3B, DNMT3L, DPP4, EED, EIF5B, ELA2, EMD, ERCC2, ERCC3, FASLG, FCER2, FOXN1, FRAP1, G6PD, GC, HAVCR2, HAX1, HIVEP1, HIVEP2, HIVEP3, HLA-A, HLA-DQB1, HLA-DRB1, HOXB4, HTATIP2, HTATSF1, ICAM1, ICOS, IFNGR1, IKBKG, IL10, IL12B, IL2, IL21R, IL2RG, IL4, IL4R, IL7R, IL8RA, IL8RB, ISG15, ITGAL, JAK3, KCNMA1, KCNMB1, KHDRBS1, KIR2DL1, KIR2DL2, KIR2DL3, KIR3DL1, KLRC4, LCK, LGALS1, LIG1, LIG4, LMO2, LRBA, M6PRBP1, MAP3K14, MBL2, MED28, MSH2, MSH5, MST1R, MTDH, NFATC1, NFATC2, NFKB1, NFKB2, NFKBIA, NFX1, NOD1, NP, NT5E, PACS1, PAX5, PDCD1, PDCD6, PIGA, PIK3R1, PML, PPIA, PRKCB1, PRKDC, PSIP1, PSMC2, PSMC3, PSMC3IP, PTPN6, PTPRC, PTX3, RAC2, RAG1, RAG2, RELA, RFX2, RFX5, RFXANK, RNASEH1, SELE, SELP, SELPLG, SERPINA1, SH3BP5, SIGLEC5, SLC11A1, SLC20A1, SLC35C1, SLC7A11, SMARCA1, SMARCB1, SP110, SPINK5, SPN, STAT1, STAT5A, STAT5B, STK19, SYK, TARBP1, TARBP2, TARDBP, TCERG1, TCN2, TFCP2, THY1, TLR2, TLR6, TLR9, TMF1, TNFRSF13B, TNFRSF4, TNFSF10, TNIP1, TP53, TPP2, TRIM5, TSG101, TXK, TXNRD1, UBP1, UMPS, VPS37B, VPS37C, WAS, XPO1, ZAP70, ZNF175
Neuroblastoma	AAAS, ABCA2, ABCB1, ACOT7, ACTG1, ADAM10, ADRB1, ADRBK2, AHNAK, AKAP9, APITD1, APP, AR, ARF4, ARNTL, ATP8A1, ATXN3, ATXN7, AURKA, AVP, AXIN2, BACE1, BACE2, BCHE, BRAF, BSN, C14orf1, CACNA1E, CASP8, CD248, CDC2L1, CDCA7L, CDH2, CDK5RAP1, CENTG1, CHD5, CHRNA3, CHRNA5, CHRNA7, CHRN2, CHRN3, CHRN4, CLCF1, CLN3, CMKLR1, CRY1, CTNNA1, CUTL2, DDX20, DFFA, DFFB, DLG1, DLK1, DPYSL3, DV1, EDG2, EDG4, EDG7, ELAVL4, ENC1, EPHB2, EPHB6, EPS15, EVI5, EWSR1, FAS, FES, FEV, FRAP1, FRZB, FZD3, GAL, GAPDH, GAS7, GDAP1, GDNF, GFAP, GJB3, GJC1, GPR3, HD, HTATIP2, ID2, ID3, IFI6, ING1, KCNIP3, KIAA0367, KIF1B, KLC1, KLK15, KREMEN1, LASS1, LCK, LINGO1, LRRC4, LRRK2, MAPK8IP1, MAX, MCFD2, MCHR1, MEIS1, MXD1, MYC, MYCL1, MYCN, NAV2, NBL1, NBP1, NCLN, NEO1, NF2, NGF, NGFR, NHLH1, NHLH2, NME1, NOTCH2, NOVA1, NPAS2, NPAS4, NPFFR2, NPY1R, NRG1, NRG2, NTN1, NTRK3, NUBP1, OGF, OLFM1, OPRD1, OSBPL1A, P2RY14, PACRG, PAK7, PALM, PARD6A, PARK2, PARK7, PCDHA4, PCDHGC3, PDLIM7, PER1, PER2, PHLDA2, PHOX2B, PI15, PIN1, PKIA, PLAGL1, PLCB1, PLD1, PLSCR1, PNPO, POU4F1, PPP2R2B, PPP2R5B, PPP2R5D, PRLHR, PRND, PRPH, PSEN1, PTBP2, PTGES2, PTPN11, PTPRF, RAD17, RAI1, RAMP1, RAMP2, RASSF1, RAVR2, RB1, RCHY1, RERE, REST, RGS5, RIC8B, RIT1, RIT2, RUFY2, RUTBC3, SCN11A, SERPINF2, SIAH1, SLC45A1, SLC8A3, SLITRK1, SLITRK2, SLITRK3, SLITRK4, SLITRK5, SLITRK6, SMAD3, SMPD3, SNCA, SNCAIP, SOD1, SORL1, SSTR2, ST6GAL2, STIM1, STMN1, SV2B, SYT4, TFCP2, TGFB1, TGFB2, TGM2, TLX2, TM2D1, TNFRSF1B, TNFRSF25, TNFRSF9, TP73, TTC12, TTC35, TXNDC4, ULK1, UNC84A, UTP11L, ZCRB1, ZMYND10, ZNF622
Delayed sleep phase syndrome	AANAT
Retinoblastoma	AANAT, AATF, ABL1, ACY1, AIPL1, APRIN, APRT, ARID4A, ARID4B, ATM, BCR, BMP1, BRCA2, CASP8, CBX5, CCNA2, CCND1, CCNDBP1, CDC2, CDH2, CDK2, CDK4, CDK6, CDKN1A, CDKN2A, CFTR, CTDSPL, CTNNA1, CTNNB1, DDX1, DNMT1, DPP10, E2F1, E2F2, E2F3, E2F4, E2F6, EID1, ELF1, EP300, ESD, EXT1, FASN, FGFR1, FOXO3A, GAS1, GNB3, HDAC1, HDAC2, HTR2A, IL6, INTS6, JARID1A, JARID1B, JARID1D, KIRREL2, LCPI, LIMD1, LMO2, LPA, MAP3K11, MDM2, MDM4, MDS1, MEN1, MITF, MLLT7, MYCN, NDC80, NDP, NR2E3, NRAS, NUB1, OPN5, PAX6, PRDM2, PROM1, PTBP2, PURA, RASSF1, RB1, RB1CC1, RBAK, RBBP4, RBBP5, RBBP6, RBBP7, RBBP8, RBBP9, RBL2, RFC1, RS1, SERPINF1, SLC1A3, SMAD3, STMN1, SUV39H1, TFD1, TGFB2, THOC1, TP53, TRAP1, TRIM13, VSX1
Insomnia	AANAT, FGFR2, GABRB3, PRNP, PTGDR, PTGDS, SPTA1

Ataxia	AARS, ABAT, ABCB7, ACP2, ADAM22, AFP, AGTPBP1, ALAS2, ALDH5A1, ANP32A, AP3B2, APBA1, APOB, APTX, ARSA, ATCAY, ATM, ATN1, ATR, ATXN1, ATXN10, ATXN2, ATXN3, ATXN7, BLM, BLOC1S1, BRCA2, BTK, C9orf61, CACNA1A, CACNB4, CANX, CCT4, CDC25A, CFL1, CHEK2, CLK2, COIL, COL4A5, COQ2, CP, CPLX1, CPLX2, CRX, CSTB, CUL4B, CUL5, DAO, DARS2, DDX10, DEK, DMPK, DNAJC19, DPYD, DPYSL5, DST, EEF1A2, EGR3, EIF2B5, ELK1, EPHX1, EPM2A, ERCC1, ERCC2, FANCI, FGF14, FMR1, FTMT, FXN, GADD45A, GAMT, GBX2, GFAP, GNAQ, GNB5, GPI, GRID2, GRM1, HAP1, HD, HFE, HINT1, HSPA1A, IL3, INPP4A, IREB2, ITPR1, IVL, KAL1, KCNA1, KCNAB1, KCNJ6, KCNMA1, KLHL1, KYNU, LDB3, ME2, MIPEP, MLLT3, MMP3, MRE11A, MSH2, MVK, MYO5A, NBN, NFATC2, NFKBIA, NOVA1, NPAT, NRXN1, NRXN3, OPHN1, OTX2, PAFAH1B3, PEX7, PHYH, PIP5K1B, PLA2G1B, PLEKHG4, PMCH, PMPCB, PNPLA6, PPP2R2B, PPT2, PQBP1, PRKCG, PRKDC, PRND, PRNP, PRPS1, PSAP, PSMC1, RAG1, RAI1, RELN, RNASE2, RORA, RUNX3, SACS, SCN1A, SCN8A, SCNM1, SDHA, SETX, SIL1, SLC17A5, SLC1A3, SLC6A19, SOD2, SORBS1, SPTBN2, SPTBN4, SYNE1, TAF1, TAF4, TBP, TCL1A, TCN2, TDP1, THY1, TITF1, TJP2, TOP2A, TRA@, TRG@, TRIM29, TTL, TTPA, UBE3A, UBQLN4, UCHL1, UCHL3, USP14, VLDLR, WNT1, WRN, XPA, XRCC1
Autoimmune disease	AARS, ADIPOQ, AKAP12, ANXA11, AURKB, BHLHB2, BTNL2, C1S, C2, C4A, CAMP, CAPN5, CBLB, CBX5, CD40, COL4A3, CTLA4, CTSL1, DAXX, DEF6, DNASE1, DSG1, DSG3, DYSF, EDC4, ELAVL4, ENO1, FAS, FASLG, FBL, FCGR2B, FCGRT, FCN3, FOXP3, G6PC2, GAD2, HAVCR1, HAVCR2, HLA-DQA1, HLA-E, HNRPR, IARS, ICOS, ID3, IL10, IL12A, IL12B, IL13, IL15, IL18, IL2, IL22, IL23A, IL27RA, IL2RA, IL32, IL4, IL6ST, IRF5, ITGB3, KARS, KLRC4, LAT, LMNB1, MAN2A1, MERTK, MFGE8, MMP9, NFX1, NLRP1, NRXN1, NRXN3, NUMA1, PDCD1, PDCD6, PIGA, PRKCD, PRKCQ, PROS1, PSEN2, PTPN22, RBM39, RC3H1, RFX5, RPL7, RUVBL1, SLC11A1, SNRP70, SNRPB, SOCS1, STX1B1, TLR5, TLR9, TNF, TNFRSF13B, TNFRSF9, TNFSF10, TNFSF13, TNFSF13B, TNFSF4, TYK2
Hyperlysinemia	AASS, DECR1
Mental retardation	ABAT, ACAT2, ACOX2, ACSL4, ADCYAP1, AFF2, AGA, AGPAT2, AGTR2, ALDH18A1, ALDH5A1, ALDOA, AMMECR1, ANK1, AP1S2, APC, ARHGEF6, ARSB, ARX, ASAH1, ASPM, ATN1, ATP6AP2, ATR, ATRX, AUTS2, BRAF, BRWD3, BSCL2, C16orf5, CA2, CACNA1D, CAV3, CBS, CC2D1A, CGGBP1, CHL1, CHRNA7, CLCN3, CLK2, CLN8, CLTCL1, CNTN4, CNTNAP2, CRBN, CRX, CTNND2, CTSA, CUL4B, CYB5R3, CYFIP1, CYFIP2, CYP27A1, DCX, DGCR2, DHFR, DLG1, DLG3, DLGAP2, DLL3, DMD, DNMT3B, DPYD, DPYS, DSCAM, DSCR2, DSCR3, DYM, DYRK1A, EHMT1, EIF2AK3, ELN, EMX2, ERCC2, ERCC5, ERCC6, EXT2, EZH2, F9, FANCI, FBN1, FGD1, FGF13, FGF14, FGFR1, FGFR2, FMR1, FOXL2, FTSJ1, FXR1, FXR2, G6PD, GABRE, GAMT, GATM, GCK, GDI1, GDI2, GNPAT, GPI, GPR143, GRIA3, GRIK2, GTF2I, GUSB, HBA1, HOXD1, HRAS, HSD17B10, IDS, IGBP1, IGF1, IL1RAPL1, IL1RAPL2, JARID1C, KCNC3, KCNE1L, KIAA1279, KIT, KRAS, KYNU, LARGE, LEPR, LIMK1, LUZP2, MAB21L1, MACF1, MAGED2, MAOA, MAOB, MAT1A, MECP2, MED12, MKKS, MPPED2, MSX1, MTR, MYST3, NBEA, NDN, NDP, NF1, NGEF, NLGN3, NPHP1, NR0B1, NSD1, OAT, OCRL, OFD1, OPHN1, P2RY8, PAFAH1B3, PAH, PAK2, PAK3, PARVB, PCCB, PEPD, PEX10, PEX5, PHF6, PHF8, PMM2, POMT1, POU1F1, PPOX, PQBP1, PRPS1, PRSS12, PTPN11, PVRL1, QDPR, RAB3GAP2, RABL2B, RAI1, RELN, REST, RHD, RPS6KA3, RPS6KA6, SATB2, SCN8A, SGCA, SHANK3, SHFM1, SHROOM4, SIM2, SLC16A2, SLC17A5, SLC1A3, SLC4A4, SLC6A8, SMC1A, SMC3, SMS, SOX3, SOX8, SRGAP3, SRPX2, STK11, STS, SUZ12, TAT, TBCE, TBX1, TBX3, TCF4, TCN2, TGFBR1, TGFBR2, THRAP2, TPI1, TRPC5, TSC1, TSC2, TSPAN7, TUB, TUBA1A, UBE2A, UBE3A, UBR1, UMPS, UPF3B, VCX3A, VLDLR, VSIG4, XG, XPA, ZDHHC15, ZEB2, ZMYM2, ZMYM3, ZNF41, ZNF81

Growth hormone	ABAT, ACE, ACLY, ADCYAP1, ADCYAP1R1, AIP, ALB, AVP, BMP1, BTK, CDKN2A, COL1A1, CRH, CRHR1, CSH1, CSH2, CSHL1, DRD4, ERCC1, ERCC4, ESR1, ESR2, FANCI, FOXA2, GADD45G, GALK1, GALR1, GH1, GH2, GHR, GHRH, GHRHR, GHRL, GHSR, GIP, GNAI2, GNB3, GPHA2, GPR39, GRB10, HESX1, HMGA2, IFI6, IFNAR1, IGF1, IGF1R, IGF2, IGFALS, IGFBP1, IGFBP3, IGFBP5, IL2, IL2RB, IL5, IL6, INS, IRS2, LEP, LIFR, MLNR, MPL, MPO, NMUR1, NR3C1, OXT, PCSK1, PDAP1, POU1F1, PRL, PRLH, PRLR, PROP1, PTGER2, PTHR1, RLN1, SCN4A, SH2B1, SOCS2, SOX2, SOX3, SSTR1, STAT5A, STAT5B, THRB, TXLNA
Seizures	ABAT, ACP2, ADARB1, AGA, AGTR2, ALDH5A1, ALPL, AMPH, AQP4, ARX, ASPM, ATN1, ATOX1, ATRX, ATXN10, AUH, AUTS2, BAK1, BIN1, BSN, CACNA1A, CACNA1G, CACNB4, CACNG2, CASR, CBS, CDK5R1, CDKL5, CFL1, CHRNA4, CHRNA7, CIT, CNR1, CNTNAP2, CPLX1, CPLX2, CSTB, CTSA, DBP, DCX, DGKD, DPYS, ELN, EMX2, EPHX1, EPM2A, F2, FLNA, FOS, FUCA1, GABBR1, GABRA4, GABRG2, GAD2, GAMT, GCK, GFAP, GGT1, GJA12, GLB1, GM2A, GNG3, GPR98, GRIA2, GRIA3, GRIK1, HD, HESX1, HLF, HTR2C, ICAM5, IDS, ITPR1, JRK, JRKL, JUN, KCNA1, KCNAB2, KCNJ11, KCNJ6, KCNQ2, MAOA, ME2, MOCS2, MSX2, MTR, NDP, NEUROD1, NFIA, NOD2, OPHN1, OTX1, PCCB, PCMT1, PDCD10, PDYN, PEX5, PPT1, PPT2, PSAP, PTS, RAI1, SCN1A, SCN1B, SCN2B, SHROOM4, SLC12A2, SLC13A1, SLC1A2, SLC1A3, SLC25A20, SLC25A22, SLC6A8, SNN, SRPX2, ST8SIA1, STXBP1, SV2A, SYN1, TAC1, TEF, TNFRSF1A, TNFRSF1B, TRPM6, TSC1, TSC2, TUBA1A, UBE3A, UCP2, XK, ZDHHC15, ZNF259
Succinic semialdehyde dehydrogenase deficiency	ABAT, ALDH5A1
Phenylketonuria	ABAT, CBS, GSTZ1, PAH, PTS, QDPR, SPR, TCF1
Fibrosis	ABCA1, ABCA4, ABCB1, ABCB4, ABCC1, ABCC8, ABCD1, ABP1, ACVRL1, ADA, ADRB1, AGT, AGTR1, AP3B1, APRT, BCAP31, BID, BIRC7, BLMH, C5, CACNA1C, CAV1, CAV3, CD177, CD19, CD1D, CD4, CFTR, CLCN2, COL15A1, COL1A2, CPA1, CR1, CR2, CRIM2, CSF2, CSRP2, CTSL1, CXCL12, CXCL2, CYP11B2, CYP3A4, DAG1, DEFB1, DEFB103A, DEFB4, DERL1, DES, DMPK, DSP, DTNBP1, DYSF, EGFR, ELMOD2, ETS1, F13B, F3, FAS, FLCN, FOS, FOXP2, FUS, GDF8, GLIS2, GLIS3, GOPC, GPX1, GRB2, GSN, GUCA2B, GUCY2C, GYS1, HBB, HFE, HPS1, HPS4, HSD11B2, HSPA8, IFNG, IFNGR1, IFNGR2, IGF1, IGKC, IKBKB, IL10, IL11, IL11RA, IL13, IL13RA2, IL17A, IL17F, IL17RA, IL1A, IL21R, IL8, IRF2, ITGAV, ITGB6, JAK2, KCNE3, KEL, KIF21A, KL, KLF15, KLF5, KLF6, KRT8, LCN1, LGALS3, LHX2, LIF, LIPA, LMNA, LTB4R, LTB4R2, MAPK14, MARCKS, MASP2, MBL2, MIA2, MKKS, MLH1, MMP14, MMP2, MMP7, MPI, MPL, MSH2, MVP, MYF6, MYH6, MYH7, NF1, NFE2L1, NFKB1, NFKB2, NOS2A, NPHP3, NPR1, NPY, P2RY2, PDZD3, PEX5, PIK3CG, PKHD1, PON1, PPP2CA, PRKAG2, PRKAR2B, PSEN2, PTGS2, PTK2, RAF1, REN, RHCE, RNF5, S100A10, S100A8, S100A9, SCNN1A, SCNN1B, SCNN1G, SDC3, SERPINB5, SERPINE1, SFTPA1, SFTPD, SLC1A5, SLC22A5, SLC2A4, SLC6A19, SMAD3, SMAD7, SOCS1, SP110, STAT3, STAT6, STUB1, TAP1, TARDBP, TERT, TFR2, TGFB1, TGM2, TLR2, TMEM27, TNNT2, UROD, VIP, WNT2, WNT3A, WRN
Cystic fibrosis	ABCA1, ABCA4, ABCB1, ABCB4, ABCC1, ABCC8, ABCD1, ABP1, BCAP31, CD1D, CFTR, CLCN2, COL1A2, CPA1, CSF2, CXCL2, CYP3A4, DEFB1, DEFB103A, DEFB4, DERL1, F13B, FOXP2, GOPC, GSN, GUCA2B, GUCY2C, HSPA8, IGKC, IL17A, IL17F, IL17RA, IL8, KCNE3, KEL, LCN1, MARCKS, MBL2, MLH1, MSH2, MVP, NPY, P2RY2, PDZD3, PON1, PRKAR2B, RNF5, S100A10, S100A8, S100A9, SCNN1A, SCNN1B, SCNN1G, SERPINE1, SLC1A5, SLC22A5, SLC6A19, STUB1, TAP1, TARDBP, VIP, WNT2
Adrenoleukodystrophy	ABCA1, ABCD1, ABCD2, ABCD3, ACOX2, AGPS, F8, FDPS, HPRT1, IDI1, MVK, PEX1, PEX10, PEX13, PEX26, PEX6, PEX7, PMP22, PXMP3, SLC27A2, SLC27A5

Neuropathy	ABCA1, ABCD1, AGER, AKR1B1, ALAD, AMACR, APC, ATXN10, BSCL2, CCT4, CCT5, COX10, CPOX, CTDTP1, DAG1, DFN59, DHFR, DHH, DNM2, DPYSL5, DRP2, EGR2, ELAVL4, EPO, ERBB4, F8, FAH, FBXW10, FECH, FXN, GAN, GDAP1, GJA12, GJA3, GJB1, GJB3, GNPTAB, HADHA, HSN2, HSPB1, HSPB8, IGHMBP2, ITGB1, KIAA0274, MAP1B, MAPT, MFN2, MPV17, MPZ, MTM1, MTMR2, NAT2, NDRG1, NEFL, NFIL3, NGFB, NINJ1, NTN1, NTRK1, PDSS1, PEO1, PEX7, PHYH, PIN1, PMP22, PNPLA6, POLG, PRPS1, PRX, RAB7A, RELA, RPIA, SBF2, SCARB2, SETX, SLA, SLC12A6, SOD1, SOD2, SOX10, SPG7, SPTLC1, TAF1, TDP1, TNRC6A, TST, TTR, VEGFA, WNK1, XK, YARS
Zellweger syndrome	ABCA1, ABCD2, ABCD3, ACOT2, ACOX2, AGPS, FDPS, IDI1, MVK, PEX1, PEX10, PEX11B, PEX13, PEX14, PEX16, PEX19, PEX26, PEX3, PEX5, PEX6, PEX7, PHYH, PSMC5, PXMP3, SCP2, SOD1
Hypoalphalipoproteinemia	ABCA1, ABCG4, APOA1
Atherosclerosis	ABCA1, ABCG5, ABCG8, ADIPOQ, ADRA1B, AGTR1, ALB, ALOX5, ALOX5AP, ANGPTL3, ANGPTL4, ANKRD1, APOA1, APOA4, APOB, APOE, APOM, CACNA1C, CBS, CCL2, CCR2, CD36, CD40, CETP, CLU, CNR2, CRP, CST3, CX3CL1, CX3CR1, CYBA, ELN, EREG, F13A1, F7, FABP4, FGA, FGB, G6PC, GDF15, GHRHR, GJA4, HSPA12A, IGF2, IL10, IL18, IL6, INS, IRF1, IRS1, ITGAM, KALRN, KL, LDLR, LECT1, LIPA, LMNA, LPA, LPL, LRP1, LYPLA1, MAPK9, MEF2A, MIF, MMP12, MMP3, MMP9, MPO, MSR1, MYD88, NF1, NFKB1, NFKB2, NOS3, NR1H2, NR1H3, NUDT6, OLR1, P2RY12, P4HA3, PCNA, PDE4D, PGF, PHLDA1, PLTP, PON1, PON2, PPARG, PTGDS, RXRA, SCARB1, SELE, SELP, SOAT1, SOAT2, SORL1, TGFB1, TLR2, TLR4, TNFRSF11B, TNFRSF1A, TNFSF4, TTPA, UCP1, USF1, VCAM1, VWF
Coronary artery disease	ABCA1, ABCG5, ADIPOQ, ANGPTL3, APOA1, APOB, APOE, BNIP3, CCL2, CD44, CETP, CLU, CRP, CYBA, CYP2C9, EDN1, ENPP1, F7, FGB, GATA2, GCK, GLA, GP1BA, GPX1, HMOX1, IL18, IL1A, IL1B, IL1RN, ITGA2, KALRN, KL, LPA, LRP6, LRP8, LTA, MEF2A, MMP9, MYLK2, NOS3, PAPP, PON1, RPA1, SCARB1, SELE, SERPIND1, SERPINE1, SMPD1, TERT, TNFRSF11B, TNNI3, TXNIP, UGT1A1
Myocardial infarction	ABCA1, ACE, ADH1C, ADRBK1, ALOX5AP, APOA1, APOC3, APOE, CAMK2D, CAMK2G, CBS, CD14, CD40LG, CETP, CIITA, CRP, CSF3, CXCL12, F12, F7, GCLC, GCLM, GJA4, GP6, GPX1, HP, HSD11B1, IGF1, IL10, ITGA2, KCNH2, KCNJ8, LDHA, LGALS2, LIF, LPA, LRP8, LTA, LTA4H, MAP3K5, MBL2, MEF2A, MMP2, MMP9, MPO, NNMT, NOS3, OLR1, PALLD, PAPP, PCSK9, PROC, PROCR, PSMA6, ROS1, RPA1, RYR2, SELP, SERPINE1, TAS2R50, TBXA2R, TLR2, TNF, TNFRSF1A, TNFSF4
Tangier disease	ABCA1, APOA1, NR1H2, NR1H3, SMPD1
Norum disease	ABCA1, LCAT
Ichthyosiform erythroderma	ABCA12, ALOX12B, ALOXE3, FLG, TGM1
Ichthyosis	ABCA12, ARSE, BRAF, CLDN1, CST6, ERCC2, FLG, GJB3, GPR143, KAL1, KEAP1, KRT2, LBR, LOR, PEX7, PNPLA2, SPINK5, ST14, STAT5B, STS, TGM1, VCX, VCX3A, XG, XK
Hypercholesterolemia	ABCA2, APOB, APOC2, APOE, C3, C7orf16, CAPN10, CAV1, CETP, EPHX2, GJA4, LDLR, LDLRAP1, LIPA, LTA, LTBR, MTTP, NTRK1, P2RY12, PCSK9, PHKA2, PPARA, REN, SCARB1, SERPINE1, SREBF2, TCF1, THRA, THRB, TLR4, TNFRSF1B, TNFSF14, TXNIP
Surfactant deficiency	ABCA3
Macular degeneration	ABCA4, ACE, BEST1, C2, C3, CCL2, CCR2, CFB, CFH, CFHR1, CFHR3, CNGB3, CP, CX3CR1, EFEMP1, ELOVL4, ENG, ERCC6, FBLN5, HEPH, HLA-B, HLA-C, HLA-DRB1, HMCN1, HTRA1, IGF1, IGF1R, IMPDH1, IMPG2, OLR1, OPTC, OSBP, OSBP2, PLEKHA1, PON1, PRPH2, RAXL1, RHO, RPGR, RS1, SAG, TIMP3

Retinitis pigmentosa	ABCA4, AHI1, AIFM1, AIPL1, AQP1, ARL3, ATF6, BBS9, CA4, CAPN3, CDH23, CERKL, CNGA1, CNGB1, CRB1, CRX, DFNB31, DGKI, DYNLT3, EIF2AK3, ERN1, FIZ1, FSCN2, GNGT1, GPR98, GRM8, GUCY2F, IMPDH1, IMPG2, IQCB1, KIF3A, MERTK, MFRP, MKKS, MPP4, NDP, NGFR, NPHP1, NR2E3, NRL, OAT, OMP, PCDH15, PDC, PDE6A, PDE6B, PDE6D, PDE6G, PEX7, PHYH, PRCD, PRKCG, PRPF3, PRPF31, PRPF8, PRPH, PRPH2, PSIP1, RAXL1, RCVRN, RD3, RDH5, RGR, RHO, RLBP1, ROM1, RP1, RP1L1, RP2, RP9, RPE65, RPGR, RPGRIP1, SEMA4A, SERPINF1, SRPX, TBCC, TBXA2R, TOPORS, TTPA, TUB, TULP1, TXNL6, USH1C, USH2A, XK
Macular dystrophy	ABCA4, AMPH, AQP1, BEST1, BEST4, CDH3, CRP, DDB1, ELOVL4, GUCY2D, IL6, IMPG1, PRPH2, ROM1, RS1, SYT7, TIMP3, VMD2L1, VMD2L3
Stargardt disease	ABCA4, DR1, MFRP, RS1
Ovarian cancer	ABCB1, ADAM11, AGGF1, AKT1, BARD1, BECN1, BIRC6, BRCA1, BRCA2, BRIP1, BTBD14B, CABLES1, CD274, CDKN2A, CHEK2, CXCL1, DAB2, DDR1, DICER1, DIRAS3, DOCK4, EDD1, EDG7, EEF1A2, EIF2C2, EIF5A2, ERBB2, FAM107A, FASN, FBXW7, FOLR1, GPR4, GPR68, HOXA10, HOXA11, HOXA7, HOXA9, HRAS, HSD17B1, HTRA1, IGF1R, IGFBP4, ING1, KLK6, KLK8, KLK9, LOH11CR2A, MPP2, MSH2, MSH6, MSLN, MUC16, MYB, NBR1, NCOA3, NR2C2, OPCML, PARK2, PAXIP1, PIK3CA, PLAGL1, POSTN, PPP2R1B, PTPN13, RAET1E, RPH3AL, RSF1, SEMA3B, SEMA3C, SPINK1, SPO11, SPP1, STK11, SULF1, TGIF2, THY1, TRIM25, UNC93A, USP11, VSIG1, VTCN1, WWOX, ZNF350
Osteosarcoma	ABCB1, ADAMTS19, AKAP12, ASPH, AURKA, BCR, C12orf5, C13orf34, C14orf11, CC2D1A, CCL8, CCR5, CDC14A, CDH11, CDKN1B, CEP250, CHEK2, CLIC4, COL10A1, COX7A2L, CXCL6, DDR1, DOCK4, EBAG9, EED, EIF4B, ENPP1, ESR1, FGFR1, FGFR3, FHL2, FOS, FOXM1, FSD1L, FXC1, GAS1, GDF5, GPR4, GPR68, GRIN2D, GTPBP3, GTSE1, HDAC10, HIF3A, HRASLS, IGF2, IGFBP5, IGFBP6, IL11RA, IL16, IQGAP1, ITGB8, KARS, KCNKG, L3MBTL, LGALS3, LIMA1, LOXL4, MAD1L1, MAML2, MAML3, MCF2L, MCPH1, MDM2, MET, NEK11, NEK2, NEK8, NME3, NOG, NUB1, NUMB, OGN, OSTF1, PALB2, PARP10, PCGF6, PHEX, PLEKHO1, PLK4, POSTN, PPARD, PPIAL4, PPM1D, PRDM1, PROS1, RASSF1, RB1, RB1CC1, RBBP9, RECQL4, RNF2, RNPS1, RPS6KA3, RUNX2, SASS6, SESN1, SET, SH3GLB1, SIRT2, SLC3A2, SOST, SP7, TADA3L, THBS2, TNIP1, TOPORS, TP53, TRIM7, TRMU, TRPA1, TTK, TUBGCP5, TUBGCP6, TXN2, UBE2T, USP10, VIL2, WT1, WWOX, ZNF350
Crohn disease	ABCB1, AGT, ATG16L1, CDH2, CEACAM6, CORT, CXCL10, DEFB4, DLG5, IL10, IL10RA, IL18, IL18BP, IL23R, IL6, ITGA4, LTA, MAPK14, NDUFA13, NOD1, NOD2, PLA2G7, REG4, RELA, SLC11A1, SLC22A4, SLC22A5, STAT3, STAT4, TNF, TNFRSF1B, TNFSF14, TNFSF15, ZFP36
Cholestasis	ABCB11, ABCB4, ABCC3, AHCY, AKR1D1, ATP8B1, ATP8B2, BCS1L, CIRH1A, CLDN1, CYP7B1, DPYS, FECH, HSD3B7, NOTCH2, NR1H4, SERPINA1, SLC25A13, VIL1, VPS33B

Anemia	ABCB7, ACP1, ACSL6, ADAMTS13, ADD1, AK1, ALAS1, ALAS2, ALDOA, AMN, ANK1, APOB, AQP1, ASAH1, ATP4B, ATP8B1, ATRX, BAAT, BLM, BPGM, BRCA2, BRIP1, CA2, CATSPER2, CCND1, CCND2, CCND3, CD47, CD59, CDAN1, CDK4, CDK6, CLDN1, COX10, CPOX, CREBBP, CSF1R, CSF2, CTSA, CTSK, CUBN, CYBRD1, DARC, DHFR, DIDO1, DKC1, DNASE2, DNM2, E2F1, EDN1, EIF2AK2, ENO1, EP300, EPB41, EPB42, EPB49, EPHX1, EPO, EPOR, ETV6, FANCA, FANCB, FANCC, FANCD2, FANCE, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, FECH, FGD1, FTMT, G6PC, G6PD, GATA1, GATA2, GCLC, GIF, GLA, GLRX5, GPI, GPX1, GSR, GSS, GSTM1, GSTP1, GSTT1, HAMP, HBB, HBE1, HEPH, HFE, HK1, HLA-DRB1, HMOX1, HPR, IFNG, IKZF1, IL23A, IL2RB, INHBA, INHBB, IRF1, ITGB3, KCNQ1, KIR2DL1, KIT, KL, KLF1, KLF2, LDHB, LGALS3, LHX2, LIG1, LPL, MAFG, MAFK, MAN2A1, MDM2, MTR, MTRR, MX1, MYB, NBN, NEK1, NF1, NFE2, NFE2L1, NFE2L2, NOS2A, NPM1, NT5C, NT5C3, PALB2, PARP1, PEPD, PGD, PGK1, PIGA, PKLR, PLG, POLG, PRDX1, PRDX2, PRF1, PSPHL, PTPN11, PUS1, RAD51, RB1, RC3H1, RHAG, RHCE, RHD, RPS19, RPS24, S100A8, S100A9, SBDS, SET, SIRPA, SLC11A2, SLC19A2, SLC25A37, SLC40A1, SLC4A1, SMARCA4, SMPD1, SPTA1, SPTB, STEAP3, STOM, STRC, TCN2, TERT, TFR2, TFRC, TJP2, TNFRSF1A, TPI1, TPB1, TTC7A, UBE2T, UMPS, UROD, WAS, XG, XK, XPA, ZBTB32, ZBTB7A, ZFPM1
Cerebellar ataxia	ABCB7, ALAS2, ANP32A, APOB, ARSA, ATN1, ATXN1, ATXN10, ATXN2, ATXN3, ATXN7, BLOC1S1, CACNA1A, COIL, COQ2, CP, CRX, DAO, DARS2, DPYD, DPYSL5, EIF2B5, FGF14, FXN, GBX2, GPI, GRID2, GRM1, HAP1, HD, HSPA1A, ITPR1, IVL, KAL1, KLHL1, KYNU, LDB3, MLLT3, MVK, OTX2, PEX7, PHYH, PLA2G1B, PLEKHG4, PMCH, PPP2R2B, PQBP1, PRKCG, PSMC1, RAI1, RORA, SCN8A, SETX, SIL1, SLC17A5, SLC6A19, SORBS1, SPTBN2, SYNE1, TAF1, TAF4, TBP, TDP1, UBQLN4, USP14, VLDLR
Menkes disease	ABCB7, ATOX1, ATP7A, ATP7B, ATRX, COMMD1, MT1A, PGK1, RP2, SLC31A1, TYR
Lung cancer	ABCC1, ABCC5, ACTN4, ACY1, ALK, APEH, ARL11, ASCL1, ATG12, AVP, BIRC2, BIRC3, BRAF, C17orf28, CACNA2D2, CACNB2, CADM1, CAGE1, CASP3, CASP8, CDH13, CDKN2A, CDON, CHEK2, CHGA, CTNNA1, CYB561D2, CYP1A1, CYP2A6, CYR61, DAB2IP, DIRAS3, DLEC1, DUS2L, E4F1, EGFR, ELAC1, ELAVL4, EML4, EMP1, EPB41L3, EPHA1, ERBB2, ERBB3, FAM107A, FAS, FASLG, FGF3, FHIT, FRK, FURIN, GNAT1, GPC5, GRPR, GSTM1, HLTF, HMGA2, HRAS, HTATIP2, HYAL1, HYAL2, HYAL3, IFRD2, IL8RB, ITGA9, JAK2, KEAP1, KRAS, LGALS3, LIMD1, LRP1B, MAGEC2, MAP3K8, MAX, MDGA1, MET, MRO, MUTYH, MXD1, MYC, MYCL1, MYCN, MYO18B, NAT1, NAT6, NOS2A, NOVA2, NUDCD1, OGG1, OXT, PCBP4, PCM1, PDRG1, PIK3CA, PLA2G2A, PLCD1, PLK4, POMC, PPIE, PPP2R1B, PRKCE, PSIP1, PTHLH, PTPN23, PTPRF, PTPRO, RAPGEF1, RASA1, RASSF1, RBM5, RBM6, RHOB2, ROBO1, RPL26, RPL6, RPS19BP1, RPSA, RTN1, S100A14, SCRT1, SEMA3B, SEMA3F, SEMA6A, SEZ6L, SHH, SLC22A18, SLC38A3, SNIP1, SOCS3, SSTR2, STK11, STX1B1, TAP1, TCF21, TCTA, TLE1, TMEM115, TMSB4X, TP73L, TSPYL2, TUBB, TUSC1, TUSC2, TUSC4, UBE1L, USP25, VIPR1, WT1, ZC3H12D, ZMYND10, ZNF35
Encephalopathy	ABCC1, AMT, ARX, BCS1L, BTK, DARS2, DLD, DLL3, EIF2B1, EIF2B2, EIF2B3, EIF2B4, EIF2B5, ENO1, ETHE1, FRAP1, GALC, GCSH, GFAP, GFM1, GLDC, GRIA3, HTR2A, JAG1, KYNU, MAPK10, MECP2, MGRN1, MLC1, MPV17, NDUFV2, NOTCH3, PRNP, QDPR, RPIA, SERPINA1, SERPINI1, SLC19A3, STAT1, SURF1, TCF4, TREM2, TUFTM, TYROBP
Paroxysmal kinesigenic choreoathetosis	ABCC11, ABCC12

Breast cancer	ABCC11, ABCC12, ABCG2, ADAM11, ADAMTS9, AGR2, AGR3, AKAP13, AKT1, ALOX12, AMPH, ANGPTL4, APPBP2, APRIN, ARHGAP8, ARID4A, ARID4B, ASH1L, ASPM, ATM, AURKA, AXIN2, BACE2, BAG4, BAP1, BARD1, BAX, BCAP31, BCAR1, BCAR3, BCAS1, BCAS2, BCAS3, BCAS4, BECN1, BIN1, BMP2, BMPR1A, BRAF, BRAP, BRCA1, BRCA2, BRIP1, BRMS1, BTC, C13orf24, C14orf156, C17orf28, C3orf28, C8orf4, CAGE1, CARD8, CASC3, CASP8, CASZ1, CBLB, CBR1, CCL5, CCND1, CCNE1, CD274, CDC2, CDC25A, CDCA7, CDH1, CDH13, CDKN1A, CDKN1B, CDKN2C, CEACAM19, CHCHD8, CHEK2, CITED4, CLDN1, CLDN7, CLU, COX7A2L, CPNE7, CRIPAK, CRYAB, CSE1L, CSF2, CTNNB1, CTSK, CTTN, CXCL1, CXCL12, CXCR4, CYP19A1, CYP1B1, CYP24A1, DAB2IP, DCD, DDX58, DICER1, DIRAS3, DIS3, DLC1, DNMT1, DPYD, DSE, DUSP3, EBAG9, EDD1, EDN1, EGR1, EIF2C2, EMCN, EP300, ERBB2, EREG, ERFFI1, ESR1, ESR2, ETS2, F2R, FABP3, FADD, FAM84B, FANCA, FANCD2, FBXO31, FBXW7, FGF8, FGFR4, FH, FOXA1, FOXC2, FOXO3A, FRK, FSCN1, FXYD3, GAB2, GLS, GLS2, GNL3, GNRHR, GPT, GRB14, GRB7, HIPK1, HIPK2, HMG20B, HMGA1, HMMR, HOXA5, HOXC6, HPR, HPSE, HRAS, HSP90AA1, HSPA2, HSPB8, ID1, IGF1, IGF2BP1, IGFBP5, IKBKB, IL13RA2, IL24, INDO, ING1, ING4, IQGAP1, ITGB3BP, ITGB4, JARID1B, JUP, KCNRG, KIAA0100, KIAA1009, KIAA1967, KISS1, KLK10, KLK12, KLK13, KLK5, KLK6, KLK7, KLK9, KRAS, LASP1, LDOC1, LGALS3, LIG4, LIMA1, LMO4, LOH11CR2A, LOH3CR2A, LOX, LPHN2, LSM1, LSP1, LUZP4, LYPD3, MAPT, MATK, MCM4, MED28, MGAT5, MLL, MMP1, MMP17, MMP2, MNAT1, MNT, MRE11A, MS4A1, MSH2, MTA1, MTA3, MTDH, MTSS1, MUC1, NBN, NBR1, NCOA3, NCOA6, NCOA7, NF2, NFKB1, NME2, NOD1, NRG3, NUDT6, OSGIN1, PALB2, PCNT, PDLIM2, PDPK1, PDRG1, PEA15, PEBP1, PELP1, PES1, PGR, PHB, PHB2, PIK3CA, PIP, POSTN, PPARBP, PPARG, PPIAL4, PPM1D, PPY, PRDX2, PRLR, PRMT1, PSMC3IP, PTEN, PTGS2, PTK6, PTN, PTPN1, PTPN6, PVRL4, PYCARD, RAD50, RAD51, RAD54B, RAD54L, RARRES3, RASSF1, RB1CC1, RBBP8, RBBP9, RBM5, RFX4, RHOB2, RINT1, RKHD4, RND1, ROBO1, RPA1, RPS16, RSF1, RSPO3, S100A11, S100A14, SAFB, SAFB2, SASH1, SCGB2A1, SCGB3A1, SERPINB5, SERPINI2, SESN2, SFN, SGK, SLC25A33, SLC2A12, SLC39A6, SMARCB1, SMYD3, SNAI1, SNCG, SNIP1, SOCS3, SPARC, SPG7, SPINT1, ST14, ST6GALNAC1, ST6GALNAC2, ST8SIA6, STARD13, STARD3, STK11, STRAP, SYK, TACC1, TACC2, TBC1D3B, TBX2, TERF2IP, TES, TFAP2B, TFAP2C, TFF1, TFF2, TFF3, TGFB3, THRSP, TIMP2, TIMP4, TJP2, TNFRSF11A, TNFSF11, TNK2, TNS1, TPD52, TPM1, TRAF4, TRIM24, TRIM25, TRPS1, TSG101, TSKU, TSPAN4, TTC4, TTC9, TWIST1, UGT2B28, VCAM1, VPS45, WWC1, WWOX, XRCC2, XRCC3, ZNF217, ZNF350
Convulsions	ABCC11, ABCC12, ADAM22, ALPL, ATN1, CHRNA4, CRH, DPYS, G6PD, GABRG2, GAMT, GPR98, GRINA, KCNB1, KCNQ2, MBP, MYO5A, PAFAH1B1, PCMT1, PDYN, PPOX, SCN1A, SCN1B, STAR
Dubin-Johnson syndrome	ABCC2, ABCC3, F7, RDX
Hyperbilirubinemia	ABCC2, FBP1, G6PD, GPX1, GSTA2, GSTP1, RDX, SPTA1, UGT1A1
Cystinuria	ABCC6, AIRE, APOB, CBS, MAT1A, MMACHC, MTR, MTRR, PREPL, SLC3A1, SLC7A9
Homocystinuria	ABCC6, CBS, MAT1A, MMACHC, MTR, MTRR
Pseudoxanthoma elasticum	ABCC6, ELN, GGCX, XYLT1, XYLT2
Alkaptonuria	ABCC6, HGD

Diabetes mellitus	ABCC8, ABCC9, ADIPOQ, AHSG, AKR1B1, AKT2, ANGPTL3, ANK1, APOA1, AQP9, C4A, CBLB, CCKAR, CDK4, CHGA, CP, CPE, CTLA4, CYP2C9, E2F1, EIF2AK3, ENPP1, ENSA, FABP2, FANCI, FXN, GAD2, GCG, GCGR, GCK, GEM, GFPT2, GJA4, GPD2, GPR35, GSK3A, GYS1, GZMA, HK2, HLA-DQA1, HLA-DQB1, HLA-DRA, HMGA2, HNF4A, HP, IAPP, ICA1, IGF1, IHPK1, IKBKB, IL10, IL1A, IL1RN, INS, INSR, IRS1, ISL1, KCNJ11, KHK, KLF11, MAFA, MBL2, MC3R, MGST3, MKKS, NEUROD1, PBX1, PCK1, PCSK1, PDE3B, PDX1, PEA15, PLAGL1, PLIN, PON2, PPARG, PPARGC1A, PPP1R2, PPP1R3A, PRSS16, PSMB8, PSMB9, PTF1A, PTPN22, PTPRN, PTPRN2, RETN, RNPEPL1, RPS6KB1, RRAD, SCNN1G, SERPINE1, SHC1, SLC19A2, SLC2A1, SLC2A10, SLC2A2, SLC2A4, SORCS1, SOX13, SREBF1, STAT3, TAP1, TCF1, TCF2, TCF7L2, TFAM, TGFB1, TRAPPC2, TUB, WFS1
Hypoglycemia	ABCC8, ACADL, ACADVL, ADCYAP1, ALDOB, CACNA1C, CDKN1C, CEBPA, CEBPB, CPT2, CRH, DGUOK, EIF2S1, EPAS1, FAH, FBP1, FOXA2, G6PC, GCK, GH1, GLUD1, GRM3, GYS2, HADHA, HADHB, HADHSC, HMGB1, HMGCL, IGF1R, IGF2, IL1B, INHBA, INHBB, INPPL1, INS, INSR, KCNJ11, LEP, MEN1, MRAP, NF1, OGDH, PCK1, PCK2, PCSK2, PHKA2, PIK3R1, PPARA, PTPRS, PYGL, SCG5, SLC22A5, SLC25A20, SOCS7, STAR, VEGFA
Stroke	ABCC8, ACCN2, AGT, ALOX5AP, AMPD1, APOA1, BAK1, BARD1, CBS, COL4A1, DDIT4, DLG4, EBP, EPO, FABP2, GAS6, GH1, GHR, GLA, GP1BA, GP6, GRIN1, GRIN2B, HSD11B2, HYOU1, IL4, ITGA2, LPA, MMP9, MYBPC3, MYO5A, NNMT, NOS1, NOS2A, NOS3, NOTCH3, NPPB, PDE4D, PLG, PNMT, PRKCH, PROC, PROZ, PTGER2, PTGS1, SELP, SLC1A2, SRR, TBXA2R, TNFRSF1A, TNFRSF1B, TOR1A, TRAK1, UCP2, USF1, VCAM1
Hypertension	ABCC8, ACE, ACE2, ACSM3, ACTN4, ACVRL1, ADAMTS13, ADD1, ADM, ADRB1, ADRBK1, AGT, AGTR1, AKT1, ALOX5, APOA1, APOE, ATP1A1, ATP2A2, BIRC5, BMPR1A, BMPR2, BRS3, C4A, CALCRL, CAST, CAT, CAV1, CD36, CDKN1A, CETP, CHGA, CIRH1A, CMA1, COMT, CYBA, CYP11B1, CYP11B2, CYP3A5, CYP4A11, DDAH1, DRD1, DRD3, DYNLT1, ECE1, EDN1, EDNRB, ELN, EMILIN1, ESR2, F13A1, FBL, FGA, FGD1, FGF2, FLT1, FMO3, FSTL3, G6PC, GH1, GHR, GJA4, GLA, GNAS, GNB3, GP1BA, GRK4, GYS1, HIF1A, HLA-A, HSD11B1, HSD11B2, HSPB7, HTR2B, IFNGR1, IL1A, IRS2, JAK3, KCNMB1, KL, KLK1, LDLR, LEPR, LIPA, MMP2, MTR, MYOC, NEDD4, NEDD4L, NF1, NOS2A, NOS3, NOTCH3, NPPA, NPPB, NPR1, NPR3, NR3C1, NR3C2, P2RY12, PDE5A, PGF, PKD1, PKD2, PLA2G1B, PNMT, POMC, PPARA, PPARG, PRCP, PROC, PTGIR, PTGIS, PTPN1, RAMP2, REN, RGS2, SCNN1A, SCNN1B, SCNN1D, SCNN1G, SDHD, SELP, SERPINE1, SLC6A4, SLC8A1, SLC9A1, SUCNR1, TAC3, TGFB1, TGFB2, TH, TNFRSF1B, TNNT2, TRPC6, UCP1, USF1, VAV3, VEGFA, WNK1, WNK4, XPNPEP2
Beckwith-Wiedemann syndrome	ABCC8, APC, CBS, CDKN1C, GPC3, IGF1R, IGF2, IGF2R, KCNQ1, MYOD1, NSD1, PTH, SIGIRR, SLC22A18, SLC22A18AS, SMPD1, TH, TRPM5, ZNF214, ZNF215
Hyperinsulinism	ABCC8, ASIP, GCK, GNE, KCNJ11

Myopathy	ABCC9, ACACA, ACADL, ACADVL, ACTA1, ACTC1, ADRB1, ADRBK1, AGA, AGL, AGTR1, ALMS1, AMPD1, AMPD3, ANK1, ANKRD1, ATP2A1, B4GALT1, BIN1, BTK, CAMK2D, CAPN3, CAV1, CAV3, CDK9, CFL2, CHRNE, CNBP, COL6A1, COL6A2, COL6A3, COL9A3, COX10, COX15, CPT2, CR1, CR2, CREB1, CRYAB, CSRP3, CTNNA3, CTS1, CUGBP1, CXADR, CXCL12, CXorf6, CYP11B2, CYP1A1, CYP2B6, CYP2C18, CYP2C19, CYP2C8, CYP2C9, CYP2D6, CYP4B1, DES, DMD, DMPK, DNAJA3, DNAJC19, DNM2, DOLK, DSG2, DSP, DYSF, ECGF1, EDN1, EDNRB, EPAS1, ERBB2, EYA4, FAH, FCMD, FER1L3, FKBP1A, FLNC, FXN, GLA, GLB1, GNAQ, GNE, GNPTAB, GUSB, HADHA, HADHB, HAMP, HDAC1, HDAC2, HEY2, HLA-DRB1, HRAS, IGHMBP2, IL6ST, ITGA7, ITGB1BP2, JUP, KCNE2, KDELRL1, KY, LAMP2, LDB3, LMNA, LMNB1, LTBP4, MAT1A, MEF2A, MEF2C, MTM1, MTMR1, MTMR2, MTMR6, MTMR7, MTMR9, MYBPC3, MYF6, MYH2, MYH7, MYL2, MYL3, MYO6, MYOT, NDUFV2, NEB, NEBL, NF1, NKX2-5, NOS3, NR3C2, NT5M, PABPN1, PDCD1, PDLIM3, PHKA1, PHKA2, PKP2, PLN, PNPLA2, POU5F1, PPAR, PPIF, PPP1CA, PPP3CA, PRKAG2, PRKCA, PSEN2, PTPN11, PUS1, RAF1, RBMX, REST, RPSA, RYR1, RYR2, SCN5A, SCN8A, SCO2, SDHB, SDHC, SEPN1, SEPP1, SFRS10, SGCA, SGCB, SGCD, SIL1, SKI, SLC22A5, SLC25A20, SLC25A3, SLC25A4, SOCS1, SOD2, SPP1, SREBF1, SRFBP1, SUCLA2, TAZ, TBX20, TFAM, TK2, TMPO, TNNC1, TNNI2, TNNI3, TNNT1, TNNT2, TPI1, TPM1, TPM2, TPM3, TRIM32, TRPC6, TSFM, TTN, TTPA, TTR, UCP3, UQCRC1, VCL, VCP, XK, ZMPSTE24
Cardiomyopathy	ABCC9, ACADL, ACADVL, ACTA1, ACTC1, ADRB1, ADRBK1, AGA, AGTR1, ALMS1, ANK1, ANKRD1, CAMK2D, CAV1, CAV3, CDK9, COX10, COX15, CPT2, CR1, CR2, CREB1, CSRP3, CTNNA3, CTS1, CUGBP1, CXADR, CXCL12, CYP11B2, CYP1A1, CYP2B6, CYP2C18, CYP2C19, CYP2C8, CYP2C9, CYP2D6, CYP4B1, DES, DMD, DMPK, DNAJA3, DNAJC19, DOLK, DSG2, DSP, DYSF, EDN1, EDNRB, ERBB2, EYA4, FAH, FCMD, FER1L3, FKBP1A, FXN, GLA, GLB1, GNAQ, GNPTAB, GUSB, HADHA, HADHB, HAMP, HDAC1, HDAC2, HEY2, HLA-DRB1, IGHMBP2, IL6ST, ITGB1BP2, JUP, KCNE2, KDELRL1, LAMP2, LDB3, LMNA, LMNB1, LTBP4, MEF2A, MEF2C, MYBPC3, MYF6, MYH7, MYL2, MYL3, MYO6, MYOT, NDUFV2, NEBL, NF1, NKX2-5, NOS3, NR3C2, PDCD1, PDLIM3, PKP2, PLN, POU5F1, PPAR, PPIF, PPP1CA, PPP3CA, PRKAG2, PRKCA, PSEN2, PTPN11, RAF1, RBMX, REST, RPSA, RYR2, SCN5A, SCN8A, SCO2, SEPN1, SEPP1, SFRS10, SGCA, SGCB, SGCD, SKI, SLC22A5, SLC25A20, SLC25A3, SLC25A4, SOCS1, SOD2, SPP1, SREBF1, SRFBP1, TAZ, TBX20, TFAM, TMPO, TNNC1, TNNI2, TNNI3, TNNT2, TPM1, TRPC6, TSFM, TTN, TTPA, TTR, UQCRC1, VCL, XK, ZMPSTE24
Ventricular tachycardia	ABCC9, ACADVL, ADRB1, ANK2, CASQ2, CTS1, FKBP1B, GNAI2, KCNH2, KCNIP2, KCNJ2, KCNJ8, RYR2, SCN5A, SEMA3A, SLC25A20, SP4
Adrenomyeloneuropathy	ABCD1, AMACR
Refsum disease	ABCD3, AMACR, FKBP4, PEX1, PEX26, PEX6, PEX7, PHYH, PXMP3, STS
Porphyria	ABCG2, ALAD, CPOX, CYP1A2, FAH, FECH, HFE, LDLR, PPOX, UROD, UROS
Protoporphyria	ABCG2, FECH
Sitosterolemia	ABCG5, ABCG8
Chanarin-Dorfman syndrome	ABHD5, PNPLA2
Myelogenous leukemia	ABL1, ABR, ACSL6, APOBEC3C, APOBEC3D, AXL, BCR, BPI, CASP10, CD177, CD3G, CEP110, CREBBP, CRKL, DEK, DMTF1, DOK1, DOK2, DPP9, ERG, ETS2, ETV6, EVI1, FANCI, FGFR1, FGFR1OP, FGFR1OP2, FN1, FNBP1, FOLR3, FOXK2, FRAT2, GIPC3, GPR30, HEMGN, HEX, HLA-B, HMHA1, HOXA7, HTRA2, IGLC1, IL11RA, IRF1, IRF8, ITGA4, JAK2, LHX1, LHX2, MAFB, MDS1, MLL, MSH3, MYB, MYST4, NF1, NKG7, NLRP1, NME3, NMNAT1, NPM1, NUDCD1, NUP98, P2RX5, PCBP2, PDGFRB, PIGS, PIGT, PPIL2, PRICKLE1, PRRX1, PURA, RARA, RB1, RGS2, RUNX1, SERPIND1, SHD, SOCS6, SPI1, ST3GAL2, ST3GAL5, TMEM16F, TOP1, TRIP11, VWF, ZMYM2

Lymphoma	ABL1, ACE2, AFF3, AICDA, AKAP8L, AKNA, AKT1, ALK, APOBEC3C, ASTL, ATG5, B2M, B3GNT3, B3GNT4, BACH2, BAD, BAK1, BBC3, BCAP31, BCL10, BCL11A, BCL11B, BCL2, BCL2A1, BCL6, BCL7A, BCL7B, BCL7C, BCR, BIRC5, BIRC7, BLM, BLNK, BLR1, BLZF1, BMI1, BRAF, BRF1, BTK, CARD11, CASP1, CASP10, CASP3, CASP8AP2, CBL, CBX7, CCL11, CCL3, CCND1, CCND2, CD163, CD27, CD320, CD3G, CD52, CD79B, CD80, CD8A, CDK6, CDKN1A, CDKN2C, CEBPB, CEP110, CES1, CHEK1, CIITA, CLIP1, CREB1, CRTC2, CTAGE1, CTAGE5, CTR9, CXCL12, CXCL13, CXCR3, CXCR4, CXorf9, CYB561, CYP11B2, DCLRE1C, DDX18, DDX6, DMTF1, DNMT1, DPM2, DSG3, EBI2, EBI3, EDG6, EIF2B5, EIF4E, EML4, ETS1, EWSR1, EXO1, F2RL3, FANCI, FAS, FBXW7, FCGR2B, FCRL4, FCRL5, FCRLM1, FCRLM2, FES, FGFR1, FGFR1OP, FGFR1OP2, FGFR3, FGFR4, FHOD1, FLI1, FMOD, FN1, FOXP1, FRAT1, FSCN1, FSTL3, FVT1, G6PD, GCET2, GFI1, GLIS1, GNRH1, GNRH2, GPC5, GPNMB, GPR30, GTF2I, H2AFX, HAX1, HDAC2, HDAC3, HEMGN, HIC1, HIST1H4I, HLA-DPB1, HMGA1, HRAS, HTATIP, HTRA2, IGHG1, IGKC, IGLC1, IKZF1, IKZF3, IL10, IL12A, IL12RB2, IL17D, IL2, IL21R, IL4I1, IL6, IL9, IL9R, ILDR1, ITPR2, ITPR3, JUN, JUNB, KIF2A, KIF4A, KLF12, LCK, LCP1, LIG4, LMO2, LPP, LRMP, LTB, LTF, MAD1L1, MADCAM1, MAGEC2, MALT1, MAX, MCF2, MCL1, MCTS1, MDGA1, MLH1, MLL, MOS, MRPL49, MSH2, MSH3, MSH6, MTAP, MUS81, MXD1, MYB, MYC, MYCBP2, NARG1, NCL, NCOA3, NCOA7, NFKB2, NME1, NMNAT1, NOLA1, NOS3, NP, NPM1, NR3C1, NTRK1, NXF1, PARP1, PAX5, PCSK7, PDCD2, PDGFB, PICALM, PIGY, PIM1, PIM2, PLA2G6, PMAIP1, PMS2, POLD1, POLI, PPARBP, PPARG, PPIL2, PPM1D, PPP1CA, PRDM1, PRDX1, PRF1, PRICKLE1, PRKCB1, PRPF19, PSMC3IP, PTEN, PTHLH, PTPN7, PTPRC, PTPRU, PXDN, RABGGTB, RAD54B, RAD54L, RAP2A, RCC2, RCE1, RHOH, RPA1, RPSA, RRAGC, RRAGD, RSPO3, RUNX1, SENP6, SH2B2, SH2D1A, SH2D1B, SKP2, SOX4, SP140, SPIB, SRI, STAG1, SUV39H1, TACC3, TCF3, TCL1A, TCL6, TFEB, TG, TGFA, THRB, TIAM1, TIAM2, TLX1, TNFRSF17, TNFRSF1A, TNFSF10, TNFSF13B, TNFSF8, TOP2A, TOP2B, TOR3A, TP53RK, TRA@, TRG@, TRPM5, TSC22D3, TSN, TYK2, ULBP1, ULBP2, ULBP3, UNC5A, UST, WIPF1, WNT10A, WRN, WWOX, XRCC4, XRCC5, XRCC6, YES1, ZBTB20, ZBTB7A, ZFP36L1, ZMAT3, ZMYM2, ZNF32
Burkitt lymphoma	ABL1, AFF3, AICDA, ATG5, B2M, BCAP31, BCL2, BCL6, BCL7A, BCL7B, BCL7C, BCR, BLR1, BLZF1, BRF1, BTK, CCND1, CD8A, CIITA, CXCL13, EBI2, EBI3, EDG6, EWSR1, EXO1, FCRL5, FHOD1, GPR30, GTF2I, HMGA1, HTRA2, IGHG1, IGKC, IGLC1, IL10, IL12A, IL12RB2, MAX, MDGA1, MOS, MXD1, MYB, MYC, MYCBP2, NARG1, NME1, NOLA1, PAX5, PIGY, PIM1, PLA2G6, POLI, PPM1D, PXDN, RABGGTB, RAP2A, RCC2, RHOH, RRAGC, RRAGD, RUNX1, SH2D1A, SP140, SPIB, TACC3, TCL6, TFEB, TG, TGFA, TOP2A, TOP2B, TOR3A, TRPM5, TSC22D3, ULBP1, ULBP2, ULBP3, UNC5A, UST, WNT10A, XRCC5, ZFP36L1, ZMAT3
Gastrointestinal stromal tumor	ABL1, KIT, PDGFRA, PDGFRB
Gastric cancer	ABO, ADRM1, AICDA, AMFR, APC, B4GALNT2, BRAF, C17orf28, C9, CAPN9, CASP10, CD44, CDH1, CDKN2A, CLDN23, COVA1, CYR61, DCC, ERBB2, FAM107A, FBXW11, FGF20, FRAT2, FUT3, FUT8, FZD3, FZD4, FZD6, GALNT14, GHRH, GIPC3, GKN1, HTRA1, IFNGR1, IGSF11, IL12A, IL12B, IL1B, IL1RN, IQGAP1, IRF1, KIAA1524, KLF6, KRAS, LDOC1, LZIC, MAP3K10, MUC1, MUTYH, OSR1, PIK3CA, PLA2G2A, PPHLN1, PPP1R1B, PRICKLE2, PTPN13, PTPN14, PTPN23, PTPN3, PTPRF, PTPRG, PTPRH, PTPRT, RNF26, RUNX3, SFRP1, ST6GALNAC1, STK11, TGFB2, TM4SF5, TMEFF2, TTC12, VSIG1, WNT2B, WNT5B, WNT9A
Colorblindness	ABO, CNGA3, F9, FLNA, G6PD, GABRA3, GNAT2, KAL1, L1CAM, OPN1LW, OPN1MW, OPN1SW, RENBP
Medulloblastoma	ABR, APC, BMI1, BMP2, CASP3, CDCA7L, CHRNA1, CTNNA1, CUTL2, DMBT1, DPYD, KCTD11, MLH1, NEO1, NF2, NTRK3, PDGFRB, PHLDA2, PIK3CA, PTCH1, PTCH2, RASSF1, RB1, RPH3AL, SHH, SMARCB1, SMO, SUFU, ZIC1

Obesity	ACACA, ACE, ACOT11, ACTN4, ADIPOQ, ADRA2B, ADRB1, ADRB2, ADRB3, AGRP, ALDH1A1, ALMS1, ANGPTL4, ANGPTL6, APOB, APOE, AQP7, ARID5B, ASIP, ATP10A, ATRN, BBS10, BBS12, BBS2, BBS4, BBS5, BDNF, BRS3, CAPN10, CARTPT, CCDC80, CCK, CCKAR, CCKBR, CCL2, CD36, CEACAM1, CEBPA, CETP, CFD, CIDEA, CNTF, CNTFR, CPE, CPT1C, CRP, CUL4B, CYP19A1, DBH, DGAT1, DGKD, DIO2, DPP4, ESRRA, FABP2, FABP4, FASN, FGA, FGF21, FMR1, FOXA2, FOXC2, FTO, GAD2, GAL, GATA2, GATA3, GDF8, GGPS1, GH1, GHRHR, GHRL, GHSR, GIPR, GNAS, GPBAR1, GYS1, HCRT, HMGA2, HSD11B1, HSD17B7, HTR2C, IAPP, IGF2, IGF2BP2, IKBKB, IL18, IL6R, IL8, INPPL1, INS, INSIG1, INSIG2, INSR, IRS1, IRS2, KCNA3, LEP, LEPR, LIPE, LMNA, LPIN1, LRP5, LYST, MAPK8, MAPK8IP1, MC3R, MC4R, MCHR1, MCHR2, MECP2, MET, MFN2, MKKS, MT1A, NCOA1, NCOA2, NDN, NEIL1, NHLH2, NMU, NPFFR2, NPY5R, NR0B2, NTRK2, PBEF1, PCSK1, PDE3B, PDSS1, PEPD, PHB, PHF6, PLIN, PMCH, POMC, PPARA, PPARG, PPARGC1A, PPARGC1B, PPP1R3A, PRKAR2B, PRLHR, PROX1, PTGER3, PTPN1, PTPN11, PYY, RAB23, RAI1, RBP4, RETN, RFWD2, RPS6KB1, RUNX1T1, SCD, SCD5, SDC1, SDC3, SERPINE1, SH2B1, SIM1, SLC27A4, SLC6A14, SORBS1, SORCS1, SPP1, SREBF1, TFEB, TGFB1, TH, TLR4, TNF, TRAPPC2, TRIB3, TRIM32, TUB, TULP1, UCN, UCP1, UCP2, UCP3, VPS13B, XBP1
VLCAD deficiency	ACADVL
Proteinuria	ACE, ACTN4, AMBP, C3, CD80, CLCN5, COL4A3, CTSL1, CUBN, CXCR4, FGA, FLT1, G6PC, GIPC1, GLA, GNE, HMOX1, IL12RB2, KIRREL, LAMB2, LEPR, LMX1B, LRP2, MAF, NOS3, NPHS1, NPHS2, PAX2, PGF, PKD1, SCNN1A, SELP, SLC12A1, TCN2, TGFB1, TMEM176A, TNFRSF13B, TNFRSF1A, TNFRSF1B, TNFSF13B, VEGFA
Renal tubular dysgenesis	ACE, AGT, AGTR1, REN
Nephropathy	ACE, AKR1B1, APOC3, APRT, AQP2, ASAH1, B2M, BDKRB2, CD14, COL4A5, FCAR, G6PC, GFPT2, GLA, IL1A, IL1RN, IL6R, LTBR, MIOX, MUC20, NPHP3, PIGR, PPP3R1, PTGDS, PTGS2, SCGB1A1, SELE, SELL, SERPINB7, SGK, SLC2A12, TCF2, TGFB1, TNFSF14, UMOD, WT1, ZEB1, ZEB2
Cardiovascular disease	ACE, ALOX5AP, APOA1, APOE, ASIP, ATP5C1, BDKRB2, CETP, CRP, CYBA, FABP2, FOLH1, G6PD, GTF2I, HP, IFNA1, IGF1, IL10, IL4, IL6R, KCNMA1, KLK1, LIMK1, LIPG, MBL2, NR1H2, NR1H3, OLR1, PDGFB, PLAT, PPARGC1A, PRDX2, PTGIS, PTGS2, RETN, SELP, SERPINE1, TBXA2R, TGFB2, TNFRSF11B, TYMS, UCP2, UQCRC2, XPNPEP2
Longevity	ACE, ALPL, ARNTL, CAT, CDK5, CDKN1A, COQ7, CRH, DDC, ERCC4, F5, FOXA1, FOXO1A, FOXO3A, GSN, GTF2H5, HCN1, HDAC1, HSF1, IARS, IGF1R, IL10, INSR, IRS2, KL, LALBA, LAMA1, LAMA2, LASS1, LASS2, LXN, MLLT7, PIK3CB, POU1F1, POU2F3, PROP1, SIRT1, SIRT3, SLC13A2, SLC2A4, SOD1, TH, UMPS, YTHDF2
Mesangial sclerosis	ACE, BDKRB2, LAMB2, NPHS2, PLCE1, WT1
Angiotensin I-converting enzyme	ACE, CMA1, REN, XPNPEP2
Angioedema	ACE, CPN1, CYP21A2, PROC, PROS1, SERPING1, XPNPEP2
Sepsis	ACE2, ADM, ALDOB, APOA1BP, BGN, CAMP, CASP1, CD14, CFI, CHRNA7, F2R, F5, FAS, FASLG, GH1, GPR77, HMGB1, IL12B, IL6, IRAK3, LBP, LCK, MARCO, MASP2, NFE2L2, NOS3, PBEF1, PROC, PROCR, SERPINA7, TLR2, TLR4, TNF, TYROBP, UCP2
Hemochromatosis	ACO1, ALAS2, ANK1, APOB, B2M, BMP2, CYBRD1, FGD1, HAMP, HFE, HFE2, HIST1H1B, HLA-A, HLA-F, PIGA, PPP1R11, SLC11A2, SLC40A1, TFR2, TRIM21, UBE2D1, UROD, ZNF192

Epilepsy	ACOT7, ADAM22, ALDH7A1, AQP4, ARHGEF9, ARX, ASPM, ATN1, ATP6AP2, AUTS2, BRD2, C16orf5, CACNA1A, CACNA2D2, CACNB4, CACNG2, CHRNA2, CHRNA3, CHRNA4, CHRNA7, CHRNA2, CLCN2, CLN8, CNTNAP2, COL18A1, CSMD3, CST3, CSTB, DAPK1, DBP, DCX, DGKD, DLGAP2, DLX1, EFHC1, EMX2, EPHX1, EPM2A, FLNA, GABRA1, GABRD, GABRG2, GAD2, GAMT, GJA9, GPR98, GRIA3, GRIK1, GRINA, GRM3, GRPR, HLF, HTR2A, HTR3A, ICAM5, IDS, ITPR1, JARID1C, JRK, KCNJ11, KCNK2, KCNMA1, KCNQ2, KCNQ3, LBR, LGI1, MC3R, ME2, MEN1, MIB1, MLLT3, NF1, NHLRC1, OTX1, PAFAH1B1, PAH, PAQR8, PCMT1, PDYN, PHF6, QDPR, RELN, REST, SCN1A, SCN1B, SLC1A2, SLC1A3, SLC25A22, SRPX2, ST3GAL5, STS, SYN1, TCF2, TEF, TMEM1, TSC1, WNT8B, ZEB2
MODY	ACP1, ADRB1, ADRB2, AGTR2, AKT1, ASIP, BCL3, CALCA, CEL, CREBBP, CRYGD, DICER1, EEA1, EGFR, ELN, EYA4, GCK, GCKR, GLA, HAO1, HNF4A, IL6, IL6R, IL6ST, INS, ISL1, KLF15, KLF2, LEPR, MAPK8IP1, MAPKAPK2, MAPT, MYH7, NCOA3, NEUROD1, NFKB1, NOS3, NPPC, NPR3, NR0B2, ONECUT1, PCAF, PCK1, PDX1, PKHD1, PLA2G4A, PLCG1, PPA1, PPA2, PPP1R3B, PRKAG2, PTPN11, SGCD, SLC1A4, SLITRK1, TAC4, TCF1, TCF2, TMC6, TMC8, TNNI3, VCL, XPC
Megaloblastic anemia	ACP1, AMN, CUBN, DHFR, MTR, MTRR, SLC19A2, TCN2, TPK1, UMPS
Favism	ACP1, G6PD, GSR
Growth retardation	ACP2, ALDOB, ARID5B, ATOX1, ATR, ATRX, B4GALT1, BACE1, BARD1, BCAR1, BCS1L, BLM, CAV3, CCNE1, CCNE2, CD9, CDC42, CDK4, CFL1, CNTN4, CNTNAP2, COPG2, CPA4, CREB1, CRHR1, CUL7, CYP21A2, DHCR7, DIO2, DLG1, DPYS, DSG4, EGF, EHMT2, EIF2AK3, ERCC5, ESX1, FAM107A, FANCA, FANCE, FANCI, FGF23, FGFR3, FUCA1, FUT8, G6PC, GATA3, GFRA2, GHR, GK, GLIS3, GNAI2, GRB10, HAP1, HBB, HIF1A, HMOX1, HS3ST1, HSD11B2, IGF1, IGF1R, IGFBP1, IGFBP5, IKBKG, INS, INSR, ISL1, KIF3B, KIF5B, LATS1, LEP, LIG4, LMNA, LMO7, MAT1A, MDC1, MEST, NBN, NCAM1, NDUFA13, NIPBL, NOS3, NRG2, PAH, PARL, PCMT1, PEX11B, PEX13, PEX5, PHKA2, PNPLA6, PPARBP, PRKACA, PRKG2, PRLR, PSPH, PTPN11, PYGL, RECQL4, RGS10, ROCK2, RPS17, RRM2B, SCGN, SCN1B, SIAH1, SLC12A1, SLC13A1, SLC2A1, SLC35C1, SLC5A5, SLC7A7, SMAD4, SMPD3, SOX10, SOX9, STAMBP, STAT5B, STOX1, SUMF1, TCOF1, TFAP2C, TKT, TNFSF11, TNFSF5IP1, UCHL3, XBP1, ZMPSTE24
Gaucher disease	ACP5, ARSA, ASPA, CHIA, CHIT1, F11, GBA, MTX1, NTRK1, PKLR, VWF
Osteopetrosis	ACP5, ATP6V1B1, BCL2, CA2, CLCN7, CTSK, FCER1G, FOS, FOSL1, JUN, LRP5, MITF, NFATC1, NFATC2, NFKB1, NFKB2, OSTM1, RELA, RGS10, SPI1, SRC, TCIRG1, TNFRSF11A, TNFRSF11B, TNFSF11, TRAF6, TYROBP
Prostate cancer	ACPP, ADRA1A, AGK, AKT1S1, ALKBH3, ANKRD21, ANP32C, ANP32D, ANXA7, AR, ATBF1, BACE2, BECN1, BMPR1B, BRCA1, BRCA2, C11orf17, C11orf30, C16orf3, C1orf27, CADM4, CAV1, CD82, CDH1, CDH13, CDKN1B, CDKN2A, CEACAM19, CHEK2, CHUK, COL23A1, CPA4, CTNNB1, CYP17A1, CYP3A4, DAB2, DAB2IP, DMBT1, EDEM3, EGR1, ELAC2, EPHB2, ERBB2, ERG, ESR1, ESR2, ETV1, EZH2, FASN, FGF8, FOLH1, GAGE7, GAS8, GHRH, GHRHR, GRB14, HIP1, HPN, HSD17B7, HTATIP, IGF1, IGFBP3, INHA, ITS2, KIAA0196, KLF12, KLF6, KLK12, KLK15, KLK2, LEP, LGALS8, LIMA1, LIMK1, LSM1, LZTS1, LZTS2, MAD1L1, MSMB, MSR1, MTSS1, MXI1, MYST2, NCOA4, NKX3-1, NUDCD1, PAGE1, PAGE4, PALB2, PARP1, PBOV1, PCDH11Y, PIM1, PKN3, PPARA, PPARG, PRR13, PSCA, PTEN, RAD54B, RASGRP3, RBL2, RDH11, RGS8, RNASEL, RUFY1, RUFY2, SERPINB5, SHH, SLC43A1, SLC45A3, SPG7, SPY1, SRD5A2, ST14, ST7, STAT3, STEAP1, STEAP2, SYT7, TBL1Y, TCF2, TF, TGM4, TMEFF2, TMEM16G, TMPRSS2, TNS4, TRIM36, TRPM8, TRPV6, TSPY1, TUSC3, WDR19, YAP1, ZMIZ1
Dystonia	ACRC, ACTB, ALDH5A1, ARX, ATP1A3, ATXN2, DBH, DLG3, DRD2, DRD5, DST, ERCC1, FGF14, FUCA1, GCDH, GCH1, GLB1, GRIN1, MAT1A, MCEE, NONO, PANK2, PARK2, SCN8A, SCNM1, SDHD, SGCE, SLC19A3, SPR, TAF1, TBP, TH, TIMM8A, TIMM8B, TOR1A, TPI1, TRAK1, TTPA

Elliptocytosis	ACSL4, AMMECR1, ANK1, BTK, EPB41, EPB42, FECH, FUCA1, GYPC, HAGH, KCNE1L, PGM1, RHCE, SLC4A1, SPTA1, SPTB, SPTBN4
Alport syndrome	ACSL4, AMMECR1, COL4A3, COL4A4, COL4A5, COL4A6, KCNE1L, MYH9, SHFM1, SLU7, USH2A, ZEB1
Deafness	ACTA1, ACTG1, ALDH7A1, ANK1, ATP2B2, ATP6V1B1, BSND, CATSPER2, CD151, CDAN1, CDH23, CDKN2D, CHL1, CLCNKA, CLCNKB, CLDN14, CLRN1, CNGA1, COL11A2, COL2A1, COL4A5, CRYM, DFNA5, DFNB31, DFNB59, DIAPH2, DSPP, EDNRB, ESPN, EYA1, FBN2, FGF3, FGFR3, FOXP1, GATA3, GDF5, GJA1, GJA3, GJB2, GJB3, GJB6, GLA, HDAC3, IDS, IGF1, KAL1, KCNE1, KCNQ4, KYNU, LHFPL5, MARVELD2, MCOLN3, MITF, MPZ, MRPS12, MYH14, MYH9, MYO15A, MYO6, MYO7A, NDP, OFD1, OMP, OPA1, OTOA, OTOF, OTOG, OTOP1, OTOR, OTOS, PAFAH1B1, PAX3, PCDH15, PDSS1, PEX7, PHEX, PMP22, POU3F4, POU4F3, PRPS1, PRRX1, RDX, RFXAP, RHD, SDHD, SHFM1, SIX1, SLC12A2, SLC12A7, SLC19A2, SLC26A4, SLC4A1, SLC4A11, SMS, SNAI2, SOX10, SPTBN4, STRC, TBL1X, TCOF1, TECTA, THRA, THRB, TIMM8A, TIMM8B, TMC1, TMC2, TMEM2, TMIE, TMPRSS3, TRIOBP, TRMU, TUB, TUBA3C, TULP1, UBASH3A, USH1C, USH1G, USH2A, WDR4, WFS1, ZFAND5
Nemaline myopathy	ACTA1, CFL2, NEB, NEBL, TNNT1, TPM2, TPM3, TTN
Marfan syndrome	ACTC1, APC, CBS, COL1A2, COL6A1, CRELD1, DCN, ELN, FBLN2, FBN1, FBN2, GNB3, LAMB1, MFAP1, MLH1, TGFB1, TGFB2
Dysautonomia	ACTL7A, ACTL7B, C9orf4, IKBKAP, NGFB, NTRK2
Muscular dystrophy	ACTN2, ADAM12, AQP4, ARX, C1QA, C1QB, C1QC, CA3, CAPN1, CAPN2, CAPN3, CASQ1, CAST, CAV1, CAV3, CFTR, COL6A1, COL6A2, COL6A3, COMP, CYP17A1, DAG1, DCTN1, DMD, DNASE1L1, DTNA, DTNB, DUX4, DYSF, EMD, F8, FBN1, FCMD, FER1L3, FGD1, FKR1, FLNA, FLNC, FMN1, FRG1, GAA, GDF8, GPC3, GYLTL1B, IDS, IGF1, IL1RAPL1, ITGA7, LAMA1, LAMA2, LAMA3, LARGE, LDB3, LMNA, LMNB1, MPP1, MUSK, MUT, MYF6, MYOD1, MYOT, MYOZ1, NDUFA2, NOL3, NOS1, NOS3, NR0B1, NRG1, OFD1, PABPN1, PDLIM3, PLEC1, POMGNT1, POMT1, PPARGC1A, PRDX2, PROM1, PTK2, RP2, SDC3, SEPN1, SEPP1, SGCA, SGCB, SGCD, SGCG, SGCZ, SLC25A4, SNTA1, SNTG2, SNW1, SREBF1, SSPN, SSX1, STS, TCAP, TGFB1, TRIM32, TTN, UTRN, XK, ZMPSTE24
Duchenne muscular dystrophy	ACTN2, ADAM12, AQP4, C1QA, C1QB, C1QC, CA3, CAST, CAV3, CFTR, DAG1, DMD, DTNA, DTNB, F8, FGD1, FLNC, GDF8, GPC3, IDS, IGF1, MUT, NOL3, NOS1, NR0B1, NRG1, OFD1, PPARGC1A, PROM1, RP2, SGCA, SGCD, SNTA1, SNTG2, SSX1, STS, TGFB1, UTRN
Glomerulosclerosis	ACTN4, AGT, CD2AP, EGFR, G6PC, IL1A, KHDRBS3, MPV17, NPHS1, NPHS2, PAX2, PLCE1, SMAD7, TGFB1, TRPC6, UNC13B, WT1
Nephrotic syndrome	ACTN4, APLP1, C4A, CD80, FLNA, IL12RB2, LAMB2, MAF, MPV17, NPHS1, NPHS2, PDSS2, PLCE1, SYNPO, WT1
Listeria monocytogenes	ACTR2, ACTR3, ANG, ARHGAP21, ARPC2, ARPC3, CBL, CD4, CD8A, CDH1, GNLY, HSP90B1, IFNAR1, IFNG, IL27RA, IRAK1, MET, MYO1F, NLRP3, NOS2A, NR1H3, PDLIM2, PRF1, PRKCD, RIPK2, SP110, SPP1, TBX21, TNFRSF1A, TNIP3, TYROBP
Adenomas	ACVR1B, AGTR1, AIP, AKR1B1, AKT1, ALDH2, APC, AVPR1B, BCL2L1, CASC3, CASR, CCND1, CDC73, CDH2, CHFR, CREB1, CRH, CRHR1, CYLD, CYP21A2, DCC, DIO2, ESR1, ESR2, FBXW7, FH, FHIT, FLCN, G6PC, GADD45G, GDNF, GNAI2, GNAQ, GNAS, HDAC2, HHEX, HMGA2, HRAS, HSD11B2, HSD17B1, HSD17B2, HSD17B4, IGF2, IL6ST, KCNH6, KCNH7, KISS1R, KRAS, LGALS3, LHCGR, MBD2, MC2R, MEN1, MMP11, MMP13, MMP9, MUC2, MUTYH, NCAM1, NF1, NFIB, NOTCH1, NR0B1, NR3C1, NRAS, NUDT6, PAX8, PIK3CA, PITX1, PITX2, PITX3, PLA2G2A, PLAG1, PLAGL2, PMS2, POMC, PPP2R1B, PRKAR1A, PRL, PRLHR, PROP1, PTH, RBPJ, RET, S100A11, SCGB1A1, SFRP1, SLC22A18, SLC22A18AS, SLC26A3, SLC26A4, SLC2A1, SLC5A5, SLC5A8, SMAD3, SMAD4, SMAD7, SMARCA4, SSTR2, ST7, TCEA1, TCF1, TCF7, TERF1, TG, THBS1, THRA, THRB, TMEFF2, TPD52, TPO, TSHR, TXNIP, VDR, ZNF331

Pancreatic cancer	ACVR1B, AKT2, APPL1, ARMET, B3GALT5, BAG4, CADM1, CD82, CDKN2A, CLIC4, CTNNAL1, DUSP6, GNG7, GNRHR, HECA, HSP90AA1, IGF2BP3, KRAS, KRT23, LSM1, MAGEC2, MGAT4C, MUC17, NEO1, OSR1, PAF1, PALLD, PIK3CA, PIM3, PTN, SERPINI2, SMAD4, SPINT2, SSTR2, STK11, TM4SF5, TMPRSS4, TP53INP1, WDR45, WIPI2
Hereditary hemorrhagic telangiectasia	ACVRL1, ANK1, BMPR1A, COL5A1, ENG, EPB41, KRIT1, SMAD4, TGFB1, XG
Cerebral cavernous malformations	ACVRL1, CCM2, ENG, KRIT1, PDCD10
SCID	ADA, AIRE, BACE2, BCL11B, BCR, BIRC5, CCNA1, CD274, CD34, CD3D, CD3E, CD44, CD80, CD93, CIITA, COL17A1, CSF3, CTDSPL, CTLA4, CXCL12, CXCL14, CXCR4, DCLRE1C, DPP4, HOXB4, HTATIP2, ID4, IL10, IL1RN, IL21R, IL2RG, IL4, IL7R, JAK3, LAMB3, LCK, LMO2, MED28, MYB, NOD1, NP, PRKDC, PROM1, PTPRC, RAG1, RAG2, SELE, SELP, SELPLG, STAT5A, STAT5B, SULF1, SULF2, THY1, TMEM142A, TNFSF4, WAS, ZAP70
Combined immunodeficiency	ADA, AIRE, CASP8, CD34, CD3D, CD44, CD7, CIITA, COL17A1, DCLRE1C, HAVCR2, HOXB4, IFNGR1, IL2, IL21R, IL2RG, IL7R, JAK3, LCK, LMO2, MED28, NFATC1, NFATC2, NFX1, NOD1, PRKDC, PTPRC, RAG1, RAG2, RFX2, RFXANK, SELE, SELP, SELPLG, STAT5A, STAT5B, THY1, WAS, ZAP70
Severe combined immunodeficiency	ADA, AIRE, CD34, CD3D, CD44, CD7, COL17A1, DCLRE1C, HAVCR2, HOXB4, IFNGR1, IL2, IL21R, IL2RG, IL7R, JAK3, LCK, LMO2, MED28, NFATC1, NFATC2, NFX1, NOD1, PRKDC, PTPRC, RAG1, RAG2, SELE, SELP, SELPLG, STAT5A, STAT5B, THY1, WAS, ZAP70
Glioblastoma	ADAM10, ADAM17, ADAM9, AKT1, ANGPT2, APC, APH1A, APH1B, ARID4A, ASPM, BAI1, BAI3, BAX, BCHE, BCL2L12, BMP4, BRSK2, BRWD2, CABC1, CAPN2, CCND1, CD274, CDC2L5, CDK6, CHES1, CHKA, CNTNAP3, CSF3, CTSB, DMBT1, EGFR, ERBB2, FGFR1, FRAP1, GBAS, GLI3, GLIPR1, GOPC, HLA-G, IL31RA, ING4, IQSEC1, JARID1A, KLHL2, KRAS, LASS1, LGI1, LRRC4, LRRN2, MAD1L1, MAF1, MGEA5, MGMT, MLH1, MLLT10, MMP24, MMP25, MXI1, NDUFA12L, NEO1, PAX6, PCYT2, PDE7A, PDGFB, PDGFRA, PDZD4, PES1, PHF20, PHF3, PHLDA2, PHLPP, PI15, PIK3CA, PKD1, PLXNB2, PROM1, PTEN, PTPRZ1, PXDN, RAB3D, RAC1, RAF1, RB1, RBBP9, ROS1, RPSA, SDF2, SEMA6B, SLC7A3, SYNJ2, TGFB2, TRIM8, VTI1B, YEATS4
Osteoarthritis	ADAM17, ADAMTS5, ANKH, ASPN, CCL2, CDH11, COL1A1, COL2A1, COL9A1, COMP, CTSK, CXCL12, CYP2C9, DKK1, ESR2, FRZB, GDF5, HTRA1, IL17A, IL2RB, IL2RG, IL32, ITGA1, LEP, LGALS3, LRCH1, LTBP3, LUM, MAP3K2, MATN3, MMP13, PRDX5, PRG4, PTHR2, RARRES2, TRAPPC2, VDR
Asthma	ADAM33, ADH5, ADRB2, ALOX5, ALOX5AP, C3, C3AR1, C5, C5AR1, CBS, CCL11, CCL18, CCL24, CCR3, CCR5, CCR6, CD209, CD274, CD74, CHIA, CLC, CMA1, COMT, CPN1, CRHR1, CXCR3, CYSLTR1, CYSLTR2, DAP3, DPP10, FABP4, FCAR, FCER1A, FCGR2B, FLG, GATA3, GGT1, GPR44, HAVCR1, HDAC3, HLA-DRB1, HLA-G, HNMT, HRH1, HSD11B2, ICOS, IL10, IL11, IL11RA, IL12B, IL13, IL13RA1, IL13RA2, IL17F, IL31, IL4, IL4R, IL5, IL6R, IL9, IL9R, IRAK3, KCNMB2, KITLG, LTB4R2, LTC4S, MARCKS, MIF, MMP12, MMP2, MMP9, MS4A2, MUC7, NFKB1, NFKB2, NPSR1, NQO1, NR1I2, PDCD1LG2, PDE11A, PDE4D, PEPD, PHF11, PIN1, PLA2G7, PTAFR, PTGDR, PTGER3, PTPN6, RASGRP4, RUNX3, SART1, SCGB3A2, SELP, SETDB2, SIGLEC5, SOCS3, SPINK5, SPRED1, SPRR2A, STAT4, STAT6, TACR3, TBX21, TBXA2R, TNF, TNFRSF4, TNFSF10, TPSAB1, TPSB2, TPSD1, TPT1, TRAF5, VDR
Weill-Marchesani syndrome	ADAMTS10

Glaucoma	ADAMTS10, ADORA3, ARSB, BCL10, BMP4, CA12, CBS, CNR2, CP, CRYAA, CYP1B1, EDNRB, EPO, FOXC1, FOXE3, FOXL2, GALNS, GLIS3, GPNMB, GREM1, LMX1B, LOXL1, MYOC, NF1, OLFM3, OPA1, OPTC, OPTN, PON1, PTGFR, RHOA, ROCK1, ROCK2, SBF2, SELE, SLC4A4, TGFB2, TNF, WDR36
Short stature	ADAMTS10, AFF2, ALDOA, ANK1, ARSB, B3GALT1, CA2, COL10A1, COL1A2, COMP, CTSK, CUL4B, CYP21A2, EBP, ERCC2, EVC, FANCI, FGD1, FLII, G6PC, GAL, GALNS, GH1, GHR, GHSR, GNPAT, GPR143, GRPR, GUSB, IGF1, IGF1R, IGF2, IL9R, LHX4, MC4R, MCPH1, MED12, MGP, NF1, NPR2, NR0B1, POU1F1, PPOX, PQBP1, PTPN11, RAI1, RECQL4, RPS6KA3, RUNX2, SGCE, SHOX, SHOX2, SLC6A8, SOS1, SOX3, SPG20, SRY, STAT5B, TRH, TRPS1, ZEB2, ZNF673, ZNF674
Brachydactyly	ADAMTS10, BMPR1B, COL2A1, CYB5R3, FANCE, FGFR3, FLII, GDF5, HOXA13, HOXD1, HOXD13, IHH, NOG, ROR2, RUNX2, SHFM1, SLURP1, TRPS1
Ectopia	ADAMTS10, CBS, FBN1, FBN2, LHX3, MFAP3, PAX6, POMGNT1, POMT1, POMT2, TGFB2
Eye anomalies	ADAMTS10, EYA1, PITX3
Thrombocytopenia	ADAMTS13, ADCYAP1, APOB, BCR, C1GALT1, CD109, CTSA, DPYD, ETS1, FANCI, FCGR2B, FLI1, GATA1, GP1BA, GP5, HOXA11, HTR2A, HTR2B, IFNA2, ITGA2, ITGA2B, ITGB3, KIR2DL1, MASTL, MPL, MYB, MYH9, NOS3, OSTM1, PECAM1, PEPD, PIGA, PLG, PRG4, PTGS1, PTTG1, RABGGTA, RC3H1, RUNX1, TCN2, TECTA, THPO, TPH1, VWF, WAS, WIPF1, ZFPM1
Hemolytic anemia	ADAMTS13, ADD1, AK1, ALDOA, ANK1, BPGM, CD47, CD59, CPOX, EPB41, EPB42, FANCI, FECH, G6PD, GCLC, GPI, GPX1, GSR, GSS, GSTP1, HBE1, HK1, HMOX1, IL2RB, LDHB, LGALS3, NFE2L2, NT5C, NT5C3, PGD, PGK1, PIGA, PKLR, PRDX1, PRDX2, RHAG, RHCE, SIRPA, SLC4A1, SPTA1, SPTB, STOM, TPI1, WAS, XK
Hemolytic-uremic syndrome	ADAMTS13, CD46, CFHR1, CFHR3
Usher syndrome	ADAMTS14, CDH23, CHML, CLRN1, CNGA1, EML1, ESRRG, GPR98, MYO7A, OMP, OTOG, P2RY14, PCDH15, PDE6G, PFN2, PROX1, RP2, SERGEF, SIAH1, SLC4A7, USH1C, USH1G, USH2A
Ehlers-Danlos syndrome	ADAMTS2, B4GALT7, COL1A1, COL1A2, COL2A1, COL3A1, COL5A1, COL5A2, COL7A1, FMOD, FN1, LOX, LUM, PLOD1, PLOD2, PLOD3, TGFB1, TNXB
Cervical carcinoma	ADAMTS9, AIP, BRAF, CENPJ, GCNT1, IQSEC1, MALL, MYBBP1A, NDOR1, NME1, NUDT5, PIK3CA, PTGER2, PTGER4, PTGS2, SCRIB, SMARCA4, ST5, TNFRSF21, UCHL5, WAPAL, ZNF202, ZNF395, ZUBR1
Renal cell carcinoma	ADAMTS9, ANKRD15, APEH, ASPSCR1, BRAF, CA12, CACNA2D3, CASP3, CD274, CLTC, COL4A3, CTDSPL, CUL2, DIRC2, ENPEP, FAM107A, FGF5, FH, GAGE1, GAGE2, GAL3ST1, GBA3, HECA, HIF3A, HRAS, HRASLS, JARID1B, KAAG1, MOS, MST1, PLAGL1, PPP2R3B, PRCC, RAF1, RASSF1, RCC1, RNF12, RNF139, ROBO1, SDHB, SET, SFPQ, ST3GAL2, TFE3, TFEB, TRIM36, TSC2, TTYH2, VBP1, VHL, VTCN1, ZNF354A
Dyschromatosis	ADAR
Hydrocephalus	ADCYAP1R1, APOB, ARSB, B4GALT1, CNP, COL18A1, COL1A1, DNAH5, EDN1, FANCB, FANCI, FCMD, FOXC1, FOXJ1, GFAP, GUSB, HIF1A, HYDIN, L1CAM, LBR, LLGL1, NAPA, NF1, NFIA, NFIX, PAFAH1B1, PAX2, POMGNT1, POMT1, POMT2, RELN, SOCS7, SPAG6, TMEM67, TP53BP2, TP73
Huntington disease	ADD1, ADRA2C, AKT1, APAF1, ARFIP2, ATM, ATN1, ATR, CALB1, CASP1, CASP3, CASP8, CNTF, CPLX2, CREB1, CREBBP, DNAJB1, DNAJC7, DRD5, EIF2AK2, F8A1, FEN1, FGFR3, FMR1, FRAP1, GIT1, GRIK2, GRK4, HAP1, HCRT, HD, HFE, HIP1, HIP1R, HIP2, HSP90AA1, HSPB1, IDUA, IFT57, IGF1, IL1B, IVL, JPH3, KALRN, LRPAP1, MSH2, MYL5, OGG1, PDE6B, QDPR, REST, RNF4, SERPINA1, SH3GL3, SLBP, SLC1A2, SNCA, TAF4, TBP, TGM2, TOR1A, TRIP10, WHSC1, XK, ZDHHC17

Hyperlipidemia	ADD1, ALOX5, APOA1, APOA2, APOA5, APOC3, APOE, CCL3, CCR2, CD36, CETP, CLOCK, CXCL2, CYP24A1, G6PC, GP1BA, GPR109B, HSD11B1, INSIG1, INSIG2, JAK3, LEPR, LIPA, LYPLA1, NMU, PPARA, PPARGC1B, SCAP, SELP, SH2B1, SREBF1, TNFRSF1B, TXNIP, USF1
Spherocytosis	ADD2, AFP, ANK1, ENO1, EPB42, EPB49, IGHG1, PKD1, RHAG, SLC4A1, SPTA1, SPTB, SPTBN4
Alcoholism	ADH1B, ADH1C, ALDH1A1, ALDH2, ANKK1, CHRM2, CRHR1, DRD2, DRD4, GABRA2, GABRG1, HFE, KRT8, SLC6A3, UROD
Alcohol dependence	ADH1B, ADH1C, ALDH2, CHRM2, GABRA2, GABRA6, HTR2A, OPRM1, SGCE, TAS2R16
Parkinson disease	ADH1C, BAG5, BAK1, BDNF, CCK, CCKAR, CDK5, COMT, CYP2D6, DAXX, DRD2, DRD3, DRD4, EN1, EN2, FAS, FGF20, GBA, GDNF, GPR37, GSK3B, GSTO1, GSTP1, HS1BP3, HTRA2, IL1B, KCNJ6, KLK6, LRRK2, MAOB, MAPT, NAT2, NEFL, NOS1, NOS2A, NR4A2, PARG, PARK2, PARK7, PAWR, PINK1, PITX3, PTS, RAB1A, RARB, RELN, RXRB, RXRG, SERPINA3, SIRT2, SLC6A3, SNCA, SNCAIP, SNCB, SNCG, SOD2, SPR, SYT11, TOR1A, TRAK1, UBB, UBE2L3, UCHL1, UGT1A9, USP14
Insulin resistance	ADIPOQ, ADIPOR1, ADIPOR2, AKT2, ALDH1A1, ANGPTL4, ANGPTL6, ANKRD23, AQP7, ASIP, BBS4, C3, CAV3, CCL2, CD36, CEACAM1, CETP, CNTF, ENPP1, FABP2, FABP4, FOXA2, FOXC2, FOXO1A, GCK, GFPT1, GIPR, HMGA1, HNF4A, HSD11B1, HSD3B2, IAPP, IGF1, IGF1R, IKBKB, IL18, INPPL1, INS, INSR, IRS1, IRS2, LEPR, LMNA, LPIN1, LPIN2, LPIN3, MAPK8, MAPK8IP1, MLYCD, NR1H4, OGG1, PDE3B, PDK4, PLIN, PLSCR3, PPARA, PPARG, PPP1R2, PPP1R3A, PRKCQ, PSCD1, PTPN1, RAB27A, RBP4, RETN, RETNLB, RPS6KB1, RRAD, SCD, SH2B1, SHC1, SIX5, SLC27A4, SLC2A1, SLC2A4, SNF1LK2, SORBS1, SPP1, SREBF1, ST3GAL5, STAT3, TCF7L2, TGFB1, TLR4, TNF, TRIB3, TUB, TULP1, TULP2, UCN2, UCP3, XBP1
Anorexia nervosa	ADIPOQ, ARVCF, BDNF, COMT, DMBX1, ESR2, HTR2A, MC4R, POMC, PPY, PYY, SLC6A2, TNFRSF11B
Pheochromocytoma	ADM, AGTR1, AGTR2, AHNK, BCL2L1, BIRC1, BTG2, CDKN1B, CHAT, CHGA, CHGB, CUL2, DBH, DDC, DDIT4, DISC1, DLK1, EGR2, FRK, GNAS, GPSM2, HSP90AA1, INHBB, KIAA1009, LAMP2, LGI1, MAP2, MAPK8IP2, MCHR1, MEN1, MTPN, MYCBP2, NF1, NF2, NPY, NTRK1, NUDT10, NUDT11, NXPH1, PA2G4, PCLO, PENK, PNMT, PPARGC1A, PPY, PRLHR, PRPH, PTGS2, PTPRF, RAB1A, RAB5A, RET, RIC8B, RIT1, RND1, RNPEP, SCG2, SDHB, SDHD, SEMA6C, SEMA6D, SLC17A6, SLC18A1, SLITRK1, SLITRK2, SLITRK3, SLITRK4, SLITRK5, SLITRK6, SMPD3, SNAP25, SSTR1, STK24, SYT13, SYT7, TERF1, TERT, UCP1, VGF, VHL
Attention-deficit hyperactivity disorder	ADRA2A, SLC6A2, SLC6A3
Resting heart rate	ADRB1, IGF1R
Malaria	ADRB2, AQP9, CCR5, CD36, CD81, CR1, CYB5R3, CYP2C19, DARC, FCGR2B, G6PD, GLA, GNAS, GNPDA1, GYPB, HBA1, HBB, HGF, HLA-B, HLA-DRB1, HMOX1, IL12A, IL4, MET, NOS2A, PKLR, SLC4A1, SPTA1, TIRAP, TLR4, TNF, XK
Adenylosuccinase deficiency	ADSL
Ewing sarcoma	ADSL, BCR, CBL, CCK, CDKN1A, DDIT3, DGCR8, ERG, ETS1, ETV1, EWSR1, FEV, FLI1, FUS, HTATSF1, LIF, MAP3K8, NFRKB, PATZ1, PDGFB, RASSF1, RNASEN, SH2D1B, STEAP1, TAF15, TGFB2, USP6, XAGE1
Rhabdomyosarcoma	AFF1, ANKRD2, ATR, BCR, BIRC5, BOC, BUB1B, C14orf58, CDKN1C, CDON, COL14A1, COL19A1, CPAMD8, DDX43, FHL2, FOXO1A, FOXO3A, HDAC10, IGF2, IGF2BP1, IGF2BP2, LIMS2, LRP1, MLLT7, MYOD1, NES, NF1, P2RXL1, PACS2, PAX3, PAX7, PTCH1, RASSF1, RB1, SAGE1, SIX1, SLC3A2, SMO, TNFSF12, TRPA1, TSPAN32, TSSC4, VIL2, XAGE1
Fragile X syndrome	AFF2, AGA, F9, FMR1, FXR1, GABRA3, MAP1B, MECP2, MED12, NUFIP1, SLC6A8, VLDLR
Microcephaly	AFF2, ALG12, ANK1, ARFGEF2, ASPM, ATR, CAV3, CDK5RAP2, CENPJ, CHL1, DNMI1L, EMX2, EOMES, EPHX1, ERCC2, FANCD2, FANCI, IGF1R, KIAA1279, LTC4S, MCPH1, MYCN, NDP, NEBL, PAH, PDHA1, PQBP1, RPS6KA3, RYK, SGCE, SHFM1, SHH, SIX3, SLC1A3, SLC25A19, SLC25A20, SLC25A22, SNX3, SOX2, TAT, TFAP2C, TUBA1A, UPB1, VPS13B, XPA, ZEB2

Obsessive-compulsive disorder	AFF2, BDNF, CNTNAP2, COMT, HTR2A, HTR3A, SLC6A4
Premature ovarian failure	AFF2, BMP15, DIAPH2, FMR1, FOXL2, FOXO3A, HLA-DQB1, LHB, NOBOX, POF1B, XPNPEP2
Analbuminemia	AFP, ALB
Spina bifida	AFP, ALDH1A2, APAF1, BHMT2, CCL2, CYP26A1, DHFR, FANCB, FUZ, GRHL3, INTU, MAP3K4, MARCKSL1, MTR, NAP1L2, PAX1, PAX3, PDGFC, PDGFRA, SHFM1, SHROOM3, SLC19A1, SP8, T, TRAF4, VANG1
Ataxia-telangiectasia	AFP, AP3B2, ATM, ATR, BRCA2, BTK, CDC25A, CHEK2, CUL5, DDX10, DEK, ELK1, FANCI, GADD45A, HINT1, MMP3, MRE11A, MSH2, NBN, NFATC2, NFKBIA, NPAT, PRKDC, RAG1, TCL1A, THY1, TOP2A, TRA@, TRG@, TRIM29, XPA
Down syndrome	AFP, APP, AVP, BACE2, BCR, CAPN2, CBR1, CBS, CHAF1B, COMT, CRELD1, CRYAA, DBN1, DSCAM, DSCR1, DSCR2, DSCR3, DSCR4, DYRK1A, ETS2, EZH2, GABPA, GART, GATA1, HBA1, HMGN1, ITGB2, ITS1, KCNE1, KCNJ15, LSS, MAD2L1, MOS, MX1, NCAM2, NDUFV3, NFATC1, NKX2-5, PCP4, PFKL, PIGP, PPP3CA, PWP2, REST, RUNX1, S100B, SIM2, SLC5A3, SOD1, STMN2, TFF1, TPTE, TTC3, UBB, WRB
Aspartylglucosaminuria	AGA
Methemoglobinemia	AGA, CYB5A, CYB5R3, G6PC
Arthropathy	AGC1, B2M, BMP2, BMP6, COL2A1, F10, HFE, IL1RN, LMNA, PRG4, RAB7A, SYVN1, WISP3
Epiphyseal dysplasia	AGC1, CHST3, COL11A2, COL2A1, COL9A1, COL9A2, COL9A3, COMP, CTSA, EIF2AK3, FUCA1, GALNS, GUSB, HAPLN1, MATN1, MATN3, PABPN1, PAPSS2, SLC26A2, SMARCAL1, TRAPPC2
Spondyloepiphyseal dysplasia	AGC1, CHST3, COL11A2, COL2A1, CTSA, GALNS, GUSB, HAPLN1, PAPSS2, SMARCAL1, TRAPPC2
Achondroplasia	AGC1, COL10A1, COL2A1, COMP, EVC2, FGFR1, FGFR2, FGFR3, HAPLN1, HFE, MATN1, NPPC, PDE6B, TOR1A
Pseudoachondroplasia	AGC1, COL10A1, COMP
Amyloidosis	AGER, APCS, APOA1, APP, B2M, CST3, CST5, F10, FGA, GSN, IGHG1, ITM2B, LYZ, MEFV, PSEN1, SAA1, TNFRSF1A, TTR
Bladder cancer	AGGF1, APOB, BARD1, BIRC5, BRAF, CDKN2A, CTAG1B, CTAG2, DAPK1, DBC1, DDX58, DNMT1, ELP4, ERBB3, ERBB4, ESR1, FASN, FGFR3, FH, FZD8, HRAS, KIAA1524, LRP1B, MTSS1, NAT1, NAT2, NOVA1, PBOV1, PIGU, SH3BP2, SSRP1, UBQLN1
Klippel-Trenaunay syndrome	AGGF1, TNFSF12
Glycogen storage disease	AGL, APC, CYB5R3, DMD, FXD2, G6PC, GAA, GBE1, GYS1, GYS2, NHLRC1, PFKM, PHKA2, PHKB, PHKG2, PRKAG2, PYGL, SLC37A4
Lipodystrophy	AGPAT2, ALB, BSCL2, C3, CFD, CREBBP, INSR, LIPE, LMNA, LMNB1, LMNB2, LPIN1, LPIN2, LPIN3, PCK1, RETN, SREBF1, TGFB1, ZMPSTE24
Atrial fibrillation	AGT, ANK2, GJA5, GJC1, KCNQ1, LMNA, PRKAG2
Coronary heart disease	AGT, CETP, CRP, FABP4, IGF2, IL10, INS, LPA, MMP3, PLA2G7, PON2, SELP, SERPINE1, TBX20, TH, THBS4, TNF, USF1
Congestive heart failure	AGTR1, AMPD1, CD40LG, E2F3, EDN1, EDNRB, FOXO1A, HFE, HPGD, NNMT, NPPB, NPR1, PAX3, PDCD1, PLN, PPARD, REN, UTS2, UTS2R, XPNPEP2, ZFPM2
Preeclampsia	AGTR1, CBS, CD9, CRHR1, CYP3A5, EDN1, ERVWE1, F5, FLT1, GSTP1, HIF1A, HLA-C, HPGD, HSD11B2, KIR2DL5A, LRP8, NOS2A, NOS3, PAPP, PGF, STOX1, TAC3, VEGFA
Hyperoxaluria	AGXT, GRHPR, SLC26A6
Tyrosinemia	AHCY, FAH, GSTZ1, HPD, MAT1A, PAH, TAT
Hypermethioninemia	AHCY, FAH, MAT1A
Joubert syndrome	AHI1, BARHL1, BARX1, NPHP1, TMEM67, WNT1

Polymicrogyria	AHI1, EOMES, GPR56, KIAA1279, PXMP3, SRPX2, VDAC1
Nephronophthisis	AHI1, GLIS2, INVS, IQCB1, MALL, NPHP1, NPHP3, NPHP4, PAX2, TINAG
Nijmegen breakage syndrome	AICDA, ATM, ATR, BLM, H2AFX, LIG4, MRE11A, MSH2, NBN, RAD50, RAD54L, WRN
H. pylori infection	AICDA, FUT2, FUT3, FUT7, IFNGR1, IL12A, IL12B, IL1B, MALT1, NFATC2, NFATC3, PTPRZ1
Colon cancer	AIFM2, AMD1, ANG, APC, APCDD1, AXIN1, AXIN2, AXUD1, B3GALT5, B3GNT3, B3GNT4, BAX, BIRC4, BIRC5, C15orf48, CALR, CARD8, CCND1, CDH1, CDKN1A, CHEK2, CLDN1, CLN3, CLU, CSE1L, CTNNB1, CUTL1, CYB561, DCC, DDX1, DNMT1, DPP4, DSG2, DYRK1B, EGFR, ETS1, EXO1, FASLG, FGF20, FGFR4, FLCN, GADD45GIP1, GALNT10, GOLGA5, GPA33, GPR18, GULP1, HDAC5, HIP1, HLTF, HRAS, IFT122, IHH, JARID1B, JUP, KRAS, LEF1, LEMD1, MAD2L2, MAP2K1, MBD2, MGAT3, MLH1, MLH3, MSH2, MSH3, MSH5, MSH6, MUC2, MYC, NF2, NLK, NUA1, ODC1, P2RXL1, PARP1, PBOV1, PDRG1, PHLPP, PIK3CG, PLA2G2A, PMS1, PMS2, PPP1CA, PRAP1, PTGER2, PTGS2, PTPRJ, PXDN, RAD54B, RAET1E, RPL38, RPS15, RPS16, RRM2B, SAMD9, SAV1, SDCCAG1, SFRP1, SIM2, SLC35B3, SLC5A8, SMAD2, SMAD3, SMAD4, SNAI1, SRC, SSX6, ST6GALNAC6, STK11, TGFB1I1, TGFB2, TM7SF3, TNFSF10, TTC12, USH1C, UTP14A, VDR, VIL2, WFDC5, WISP1, XRCC2, XRCC5, ZNF148
Leber congenital amaurosis	AIPL1, CRB1, CRX, FSCN2, GUCY2D, IMPDH1, IMPG2, NPHP3, NPHP4, NUB1, RAXL1, RD3, RDH12, RGR, RPE65, RPGRIP1
Myasthenia	AIRE, AKAP12, CD55, CHRNA1, CHRNA3, CHRNE, CHRNG, CXCL10, CXCR3, CYP21A2, DOK7, FOXP3, IL1A, IRF8, STAT6, TRA@, VAMP2
Hypoparathyroidism	AIRE, ATP11C, CASR, DGCR2, GATA3, GCM2, GNAS, GPR1, PTH, PTHR1, SOX3, STX16, TBCE, WNK1
Hypoparathyroidism	AIRE, ATP11C, CASR, DGCR2, GATA3, GCM2, GNAS, GPR1, PTH, PTHR1, SOX3, STX16, TBCE, WNK1
Omenn syndrome	AIRE, DCLRE1C, NOS2A, RAG1, RAG2, SPINK5
G6PD deficiency	AK1, ALAS2, G6PD, PGD, PKLR
Nail-patella syndrome	AK1, COL5A1, LMX1B, SURF1
Neurofibromatosis	AK3L1, AP1B1, APC, APOBEC1, BRCA2, CCM2, CENTA2, EVI2A, GABRA5, GDNF, MLH1, MSH2, MXI1, NF1, NF2, NGFB, OMG, PMP22, PTPN11, PXN, SMARCB1, SPRED1, SUZ12
Neurofibromatosis	AK3L1, AP1B1, APC, APOBEC1, BRCA2, CCM2, CENTA2, EVI2A, GABRA5, GDNF, MLH1, MSH2, MXI1, NF1, NF2, NGFB, OMG, PMP22, PTPN11, PXN, SMARCB1, SPRED1, SUZ12
Arrhythmogenic right ventricular dysplasia	AKAP6, DSC2, DSG2, DSP, PKP2, RPSA, RYR2, TGFB3
Long QT syndrome	AKAP9, ALG10, ANK2, GNAI2, KCNA4, KCNAB1, KCNE1, KCNE2, KCNH2, KCNJ2, KCNQ1, KCNQ2, SCN5A
Cataract	AKR1B1, ALDH18A1, AUTS2, BFSP1, BFSP2, BUB1B, CASR, CAT, CDKN1B, CHX10, COL4A5, CRYAA, CRYAB, CRYBA1, CRYBA2, CRYBA4, CRYBB1, CRYBB2, CRYBB3, CRYGA, CRYGC, CRYGD, CRYGS, CRYZ, CTDP1, DARC, DMPK, DNASE2B, EBP, ERCC6, EYA1, FAM126A, FDFT1, FOXE3, FTH1, FTL, G6PD, GALK1, GCNT2, GJA3, GJA8, GNPAT, GPX1, GSR, HSF4, IGF1, LIM2, LSS, MAF, MBNL1, MIP, MYH9, MYOC, NCOA6, NDP, NHS, OAT, OPA3, PAH, PAX6, PCBD1, PEX7, PITX3, PSIP1, RAB3GAP2, RB1, RHCE, RHD, RP2, SEC23A, SIL1, SIX5, SIX6, SLC40A1, SLC4A4, SOCS1, SORD, SOX9, SPARC, TAF1, WRN
Adrenocortical carcinoma	AKR1B1, CDKN1C, CREB1, CYP21A2, DES, MC2R, MEN1, NR0B1, SMARCA4, THBS1, TNXB
Non-Hodgkin lymphoma	AKT1, ALK, BACH2, BCL10, BCL11A, BCL2, BCL6, BCL7A, BIRC5, CASP10, CASP3, CEP110, CES1, CLIP1, CXCR3, CYP11B2, DSG3, FCRL4, FCRL5, FGFR1OP, FSCN1, FSTL3, G6PD, HIST1H4I, LCK, LCP1, LTB, MALT1, MCTS1, MRPL49, MSH2, MYB, NFKB2, NPM1, NTRK1, PRDM1, PRF1, PTEN, PTPN7, RAD54L, RHOH, SH2D1A, ZMYM2

Schizophrenia	AKT1, APOL1, APOL2, APOL4, ARSA, ATXN1, BDNF, CALCA, CAMK2B, CCKAR, CHI3L1, CHRFAM7A, CHRM1, CHRNA7, CLINT1, CLOCK, CNTF, COMT, DAO, DAOA, DISC1, DNMT1, DRD1, DRD2, DRD3, DRD4, DRD5, DTNBP1, DVL1, EGF, ERBB4, FXYD6, FZD3, GABRG2, GCLM, GNAL, GPR50, GRIN1, GRM3, HD, HSPA6, HTR2A, HTR2C, HTR3A, HTR4, KCNN3, KIAA0391, MAOB, MLC1, NDEL1, NOS1, NOTCH4, NPAS3, NRG1, NSF, PDE4B, PHOX2B, POMC, PPP1R1B, PPP3CC, PRODH, QKI, RAI1, RARB, RELN, RGS4, RTN4R, RXRB, RXRG, SLC6A3, SLC6A4, SRR, SYN2, SYN3, TAAR6, TBX1, TSNAX, USP14, ZDHHHC8
Tuberous sclerosis	ALAD, CCM2, COL5A1, IFNG, KIF1A, MEN1, NTHL1, PKD1, REXO4, SLC12A3, SSTR5, SURF1, TPT1, TSC1, TSC2, VAV2
Lead poisoning	ALAD, HFE, NT5C3
Cirrhosis	ALAS2, ALDOB, CEACAM5, CEBPB, CIRH1A, CYP7B1, DLAT, DPYS, FAH, FGD1, G6PD, GHR, HAMP, HFE, IL10, KRT18, KRT8, LBR, LSM14A, MBL2, MTPP, PHKG2, RBM39, SERPINA1, SLC11A1, SMPD1, SOCS1, SP100, SP140
Myelodysplastic syndrome	ALAS2, APOBEC3G, CBFA2T2, CDKN2B, CNOT8, CTNNA1, CYP3A4, ETV6, EVI1, FLT3, GSTT1, HDAC3, IRF1, ITK, JTB, KIT, KRAS, MLF1, MSH3, MYC, NPM1, NUP98, ORC5L, PCCB, PDGFRB, PF4, PIGA, PILRA, PLCB1, PPBP, PRDM16, PTPN11, RPL22, RUNX1, RUNX2, SEPP1, TEC, TNFRSF9, TOP1, WT1
Graft-versus-host disease	ALAS2, CD40, FANCI, FOXP3, HLA-A, HLA-DQB1, HLA-DRB1, HMHA1, IFNG, IL18, INPP5D, NR3C1, P2RX5, PECAM1, PTGS2, TMSB4Y, TNFSF10, UGT2B17, ZFP36
Dysalbuminemic hyperthyroxinemia	ALB
Osteoporosis	ALB, ALOX15, BGN, CALCR, CASP3, CBS, COL1A1, COL1A2, CRTAP, CTSK, CYP19A1, DARC, EIF2AK3, ERCC2, FUT7, GH1, GLA, HDC, HSD11B1, IL1B, IL1R1, IL1RN, IL4, IL6, INPP5D, ITGAV, ITGB2, KL, LEP, LMNA, LRP5, MGP, MMP2, NPPB, PDLIM4, POLG, PPP3CA, PTGER4, PTH, PTK2B, RUNX2, SATB2, SH3BP2, SLC34A1, SLC7A7, SOST, SPP1, TCIRG1, TNFRSF11B, TSHR, VDR, WRN, ZAP70
Osteoporosis	ALB, ALOX15, BGN, CALCR, CASP3, CBS, COL1A1, COL1A2, CRTAP, CTSK, CYP19A1, DARC, EIF2AK3, ERCC2, FUT7, GH1, GLA, HDC, HSD11B1, IL1B, IL1R1, IL1RN, IL4, IL6, INPP5D, ITGAV, ITGB2, KL, LEP, LMNA, LRP5, MGP, MMP2, NPPB, PDLIM4, POLG, PPP3CA, PTGER4, PTH, PTK2B, RUNX2, SATB2, SH3BP2, SLC34A1, SLC7A7, SOST, SPP1, TCIRG1, TNFRSF11B, TSHR, VDR, WRN, ZAP70
Lupus erythematosus	ALB, APOE, AXL, BIRC5, C1QA, C1QB, C1R, C2, C4A, CBARA1, CD226, CD4, CD72, CDKN1A, CFI, CHD4, CMKLR1, COL7A1, CR1, CR2, CREB1, CREM, CRP, CTLA4, DEF6, DNASE1, EEF2K, FAS, FASLG, FCGR2B, FCGR3A, FCGR3B, FCN3, FCRL3, GADD45A, GOLGA2, GOLGA3, GRIN2A, GRIN2B, GSR, IFNA1, IKZF3, IL10, IL18, IL1RN, IRF5, ITGAL, LTK, LYN, MAN2A1, MASP2, MBL2, MERTK, NAT2, PDCD1, PEPD, PIK3CG, PLA2G7, POU2AF1, PRKAR1A, PSEN2, PSME3, PTGS2, RARRES2, RC3H1, RPL7, SNRPD1, SNRPD2, SNRPE, SPAG9, SSB, STAT4, TLR5, TLR7, TNF, TNFRSF13B, TNFRSF13C, TNFRSF9, TNFSF11, TNFSF13, TNFSF13B, TNRC6A, TRA@, TRD@, TRIM21, TROVE2, TSPYL2, TYK2, TYRO3, VWF, XPC, XRCC6
Systemic lupus erythematosus	ALB, APOE, AXL, BIRC5, C1QA, C1QB, C2, C4A, CBARA1, CD226, CD4, CD72, CDKN1A, CFI, CHD4, COL7A1, CR1, CR2, CREB1, CREM, CRP, CTLA4, DEF6, DNASE1, EEF2K, FAS, FASLG, FCGR2B, FCGR3A, FCGR3B, FCN3, FCRL3, GADD45A, GOLGA2, GOLGA3, GRIN2A, GRIN2B, GSR, IFNA1, IKZF3, IL10, IL18, IL1RN, IRF5, ITGAL, LTK, LYN, MAN2A1, MASP2, MBL2, MERTK, NAT2, PDCD1, PEPD, PIK3CG, PLA2G7, POU2AF1, PRKAR1A, PSEN2, PSME3, PTGS2, RC3H1, RPL7, SNRPD1, SNRPE, SPAG9, SSB, STAT4, TLR5, TLR7, TNF, TNFRSF13B, TNFRSF13C, TNFRSF9, TNFSF13, TNFSF13B, TNRC6A, TRA@, TRD@, TRIM21, TROVE2, TYK2, TYRO3, VWF, XPC, XRCC6
Hypothyroidism	ALB, APOE, CBS, CREB1, DIO3, DUOX2, FANCI, FOXE1, GLIS3, GNA11, GNAQ, GPR1, IL4, LEP, MED12, MYH6, MYH7, NRG1, PAX8, PPARBP, PROP1, SLC16A2, SLC5A5, TG, THRB, TITF1, TPO, TRH

Wilson disease	ALB, ATOX1, ATP7B, B2M, BIRC4, COMMD1, ESD, HFE, MT1A, PCDH8, SLC11A2, SLC31A1, SMPD1
Graves disease	ALB, CACNA1S, CD4, CTLA4, DIO1, DIO2, FCGR3B, FLNB, ICAM1, IL13, IL4, IRF1, KCNE3, KLKB1, LMOD1, LRP2, PTPRC, SERPINA7, SLC14A1, SLC25A16, SLC26A4, TG, TMOD1, TSHR, VDR, XRCC6
Hyperthyroidism	ALB, CTLA4, DBH, GNAS, GPR1, LHCGR, LMOD1, THRB, TRH, TSHR, UCP1
Rheumatoid arthritis	ALCAM, ASAH1, AXL, BMP2, BMP6, BST1, BST2, BTK, C2, C5, CAST, CCL2, CCR2, CD44, CDH11, CDKN1A, CES1, CHD4, CHI3L1, CHRNA7, CIITA, CLEC4D, CTLA4, CTSK, CXCL12, CYP2C9, DEK, DKK1, DNASE2, EBI3, EEF1A1, F8, FCGR3A, FCRL3, FLT1, FOS, FSTL1, GOLGA8B, GOLGB1, GP5, GPI, HLA-C, HLA-DQA1, HLA-DRB1, HLA-G, IFNG, IGKC, IL10, IL12A, IL17A, IL1A, IL1B, IL1RN, IL2RB, IL2RG, IL3, IL32, IL6, IL6ST, KIR2DS2, LGALS3, LST1, MAP3K14, MAP3K2, MAPKAPK2, MATN1, MEFV, MERTK, MIF, NFKBIL1, NR4A2, PADI1, PADI2, PADI3, PADI4, PIK3CG, PLA2G2A, PLA2G4A, PTGES, PTPN22, RARRES2, SAA1, SEMA3C, SERPINA1, SERPINH1, SFRS8, SIGLEC5, SLAMF1, SLC11A1, SLC22A4, SOCS3, SPP1, STAT1, STAT4, STAT6, SYVN1, TBX21, TNF, TNFAIP6, TNFRSF13B, TNFRSF9, TNFSF13, TNFSF13B, TNNT2, TNXB, TRAF1, TRAPPC2, TRAT1, TYRO3, VIP, ZAP70, ZFP36
Hyperammonemia	ALDH18A1, ARG1, GLUD1, GLUL, GNE, HMGCL, NAGS, OAT, OTC, PCCB, SLC25A15, SLC25A2, SLC25A20
Citrullinemia	ALDH18A1, ASS1, SLC25A13
DiGeorge syndrome	ALDH1A2, ARVCF, ATP6V1E1, BID, CDC45L, CLTCL1, CRKL, DGCR14, DGCR2, DGCR6, DGCR6L, DGCR8, GNB1L, GSCL, HIRA, LZTR1, MRPL40, NEBL, NPLOC4, PCQAP, PVALB, RNASEN, SLC25A1, SMTN, TBX1, TBX19, TBX22, TBX5, TIMP3, UFD1L, USP18, YPEL1, ZNF74
Velocardiofacial syndrome	ALDH1A2, ARVCF, ATP6V1E1, CLDN5, CLTCL1, COMT, CRKL, DGCR14, DGCR2, DGCR6, DGCR6L, GP1BB, GSCL, HIRA, MRPL40, NPLOC4, RTN4R, SLC25A1, TBX1, YPEL1
Alcohol intolerance	ALDH2
Uterine leiomyoma	ALDH2, APEX1, CCNB1IP1, COX6C, CUTL1, DPT, FH, HMGA2, MAX, RAD51L1, SFRP1, TSPAN31, WDR22, WNT7A
Sjogren-Larsson syndrome	ALDH3A2, STS
Hyperprolinemia	ALDH4A1, PRODH
Methylmalonate semialdehyde dehydrogenase deficiency	ALDH6A1
Noonan syndrome	ALDOA, BRAF, DCN, DTX1, EPS8, FGD1, HRAS, KRAS, NF1, PTPN11, RAF1, SOS1, TBX3
Renal tubular acidosis	ALDOB, ATP6V0A4, ATP6V1B1, CA2, CA4, FOXI1, G6PC, PHKA2, SLC12A7, SLC4A1, SLC4A4, WNK1
Galactosemia	ALDOB, GALE, GALK2, GALT
Fructose intolerance	ALDOB, GPD1, GPD2, KHK
Carbohydrate-deficient glycoprotein syndrome	ALDOB, MPI, PMM2
Congenital disorder of glycosylation	ALG1, ALG12, ALG3, ALG6, ALG8, B4GALT1, COG1, COG7, COG8, DPM1, MGAT2, MPDU1, SLC35A1, SLC35C1
Acquired long QT syndrome	ALG10, KCNH2
Unipolar depression	ALG9, DRD4, SLC6A4, TPH2
Nonsmall cell lung cancer	ALK, BIRC2, BIRC3, BRAF, CASP3, CDKN2A, CHEK2, CYR61, E4F1, EGFR, EML4, FAM107A, FGF3, FURIN, IL8RB, JAK2, LGALS3, LRP1B, PIK3CA, RAPGEF1, RASSF1, RBM5, SEMA3B, TCF21, TMSB4X, TSPYL2, TUBB, TUSC2

Tuberculosis	ALOX5, BCHE, CAMP, CCL2, CCR2, CCR5, CD1A, CD1B, CD1C, CD209, CD44, CORO1A, CYP24A1, CYP27B1, GNLY, HLA-B, HLA-DQB1, HLA-DRB1, IFNG, IFNGR1, IFNGR2, IL10, IL12A, IL12B, IL12RB1, IL12RB2, MAP2K1, MAP2K2, MAP2K3, MAP2K4, MAP3K5, MBL2, MYD88, NAT2, NCR1, NOS2A, PSAP, SFTPA1, SLC11A1, SP110, TIRAP, TLR2, TNF, TNFRSF1A, VDR
Aortic aneurysm	ALOX5, CCL3, CST3, CTSC, CXCL2, ELN, FBLN2, FBN1, MAPK8, MMP12, MYH11, SLC2A10, TGFB1
Palmoplantar keratoderma	ALOXE3, CTSC, DSG1, DSP, GJA1, GJB2, GJB3, KRT1, KRT14, KRT16, KRT2, KRT9, SLURP1
Odontohypophosphatasia	ALPL
Hypophosphatemia	ALPL, CYP2R1, DMP1, FGF23, NF1, PHEX, PTHLH, PTHR1, SLC34A1, SLC34A3, SMS, VDR
Hypophosphatasia	ALPL, FGF23
Primary lateral sclerosis	ALS2
Amyotrophic lateral sclerosis	ALS2, ANG, ANKRD1, ANKRD2, AOX1, APEX1, CAPN1, CAPN2, CCS, CDK5, CHMP2B, CNTF, CTF1, DAXX, DCTN1, DCTN2, DYNC1H1, FAS, FOLH1, GRIA2, GRM2, IL3, KIF1A, MAP3K5, MAPK14, NEFH, NEFL, NOS1, PRPH, RTN4, SETX, SLC1A1, SLC1A2, SMN2, SNCA, SOD1, SOD2, SPAST, TRPM7, VAPB, YWHAQ
Craniosynostosis	ALX4, EFNB1, FBN1, FGF8, FGFR1, FGFR2, FGFR3, MSX2, RAB23, RECQL4, SNAI1, SOX6, TCF3, TGFB1, TGFB2, TWIST1
Parietal foramina	ALX4, EXT2, MSX2
Familial Mediterranean fever	AMBP, ANXA1, IL32, MEFV, MID2, MMP25, OR1F1, PSTPIP1, SAA1, TNFRSF1A, ZNF200, ZNF205
Amelogenesis imperfecta	AMELX, AMELY, DLX3, ENAM, FST, KLK4, MMP20, TUFT1
Persistent Mullerian duct syndrome	AMH, AMHR2
Cryptorchidism	AMH, AR, ARID5B, CLTCL1, DAZ1, DMRT1, DMRT2, FANCE, FGD1, GNRH1, GNRHR, INSL3, KAL1, MED12, MTMR1, NFIA, PTPN11, RXFP2, SPATA4, STS
Androgen insensitivity	AMH, AR, OPHN1
Ovarian dysgenesis	AMH, BMP15, CENPI, FSHR, GPR1, IL2
Virilization	AMH, CYP19A1, CYP21A2, HSD3B2, NR3C1, POR, SRD5A1, SRD5A2
Gonadal dysgenesis	AMH, DHH, DMRT2, LHX9, RPS4X, RPS4Y1, SRY, ZFX
Myoadenylate deaminase deficiency	AMPD1
Creatine phosphokinase	AMPD1, XK
Glycine encephalopathy	AMT, DLD, GCSH, GLDC
Polycystic kidney disease	ANK1, ATP6V0C, BCL2, CCNF, E4F1, GFER, GRM1, HBA1, HSD17B8, IFT88, INVS, KIAA0319, KIF3A, MCM3, MCOLN1, MEP1A, NEK1, NEK8, NOS3, NPHP3, PKD1, PKD2, PKD2L1, PKD2L2, PKHD1, PKHD1L1, PRKCSH, PRKX, PTER, PTPN13, SEC63, SET, SLC39A7, SSTR5, STAT6, TBL3, TCF2, TFAP2B, TMEM67, TRPM5, TSC2
Hypogonadotropic hypogonadism	ANK1, CGNL1, FGFR1, FSHB, GNRH1, GNRHR, KAL1, KISS1R, LATS1, LEPR, MC4R, NELF, NR0B1, PCSK1, SOX2, STS
Sickle cell anemia	ANK1, DARC, EDN1, HBB, HBE1, HFE, HPR, KL, PKLR, TNFRSF1A
Cholelithiasis	ANK1, GSTP1
Gilbert syndrome	ANK1, UGT1A1
Brugada syndrome	ANK3, KCNQ1, SCN5A

Craniometaphyseal dysplasia	ANKH
Chondrocalcinosis	ANKH, ENPP1
Bare lymphocyte syndrome	ANKRA2, CIITA, RFX5, RFXANK, RFXAP, TAP1, TAP2, TAPBP
Meningioma	AP1B1, BCHE, C14orf1, CLTCL1, CTAGE5, EGFL6, EPB41L3, EPHX1, ETV7, EWSR1, GJA1, GJB2, IGFBP7, LARGE, MGEA5, MMP24, MMP25, MN1, NEFH, NF1, NF2, TCN2, TNKS2, TNR
Night blindness	AP3B1, BHLHB4, CABP4, CACNA1F, CYP4V2, GNAT1, GRK1, GRM6, NRL, NYX, OAT, PDE6H, RDH5, RHO, RP1, RP2, RPE65, SAG, TTPA
Hermansky-Pudlak syndrome	AP3B1, BLOC1S3, CD1B, CD63, CNO, DTNBP1, HPS1, HPS3, HPS4, HPS5, HPS6, MUTED, SLC24A5, TYR
Neutropenia	AP3B1, CD177, CEBPA, CSF3R, CXCR4, DNM2, EEF1A1, ELA2, FCGR3A, GATA1, GFI1, HAX1, IFNA2, IL8, LEF1, SBDS, SLC37A4, TCN2, UGT1A1, VPS13B, WAS
Forebrain defects	APAF1
Friedreich ataxia	APBA1, C9orf61, COL4A5, CSTB, FTMT, FXN, HFE, ME2, MIPEP, PIP5K1B, PMPCB, SDHA, SOD2, TJP2, TTPA
Dementia	APBA3, APBB1, APOC1, APOE, APP, ATN1, ATP13A2, ATXN10, BTK, CAPN2, CHMP2B, CP, CXCL11, CXCL12, CXCR4, DPYSL5, ELAVL4, EPM2A, FAS, FMNL1, GBA, GLO1, GRIA3, GRN, HAP1, HD, IDE, IGF1, IL6, ITM2B, KLK6, MAP3K14, MAPT, MEOX2, MME, MMP2, NCKAP1, NEFL, NOTCH3, NPEPPS, PRNP, RELN, SERPINA1, SNCA, SNCAIP, SNCB, SPG21, TARDBP, TGFB2, TREM2, TRPM7, TYROBP, UBB, VCP, VLDLR
Adrenal cortical carcinoma	APC
Gardner syndrome	APC
Polyposis	APC, ATP5A1, BMP4, BMPR1A, BRCA1, BRCA2, CCL11, CDX2, CLU, CTNNB1, DCC, ENG, EXO1, FANCA, FANCI, FEN1, G6PC, GYP A, HDAC2, IHH, KRAS, MAPRE2, MAPRE3, MLH1, MLH3, MSH2, MSH3, MSH5, MSH6, MUTYH, MYC, NAT1, NF1, NTN1, PLA2G2A, PMS1, PMS2, PPARD, PTEN, PTGS2, REEP5, SIAH1, SMAD2, SMAD3, SMAD4, SRP19, STK11, STK11IP, TGFB2, TMEFF2, XPA
Thyroid carcinoma	APC, C8orf4, CACNA1H, CALCA, CCDC6, CD80, CD86, CDC73, CDH1, CHGA, CTAG1B, CXCR4, DUOX1, DUOX2, ERC1, FRS2, FXYD5, GADD45G, GOLGA5, HIPK2, KIAA0101, MAP3K8, MINPP1, NARG1, NCOA4, NRAS, NTRK1, PAX8, PCM1, PIK3CA, PRKAR1A, PRKCE, PTEN, PTTG1, RET, RREB1, SCN9A, SLC26A4, SLC2A1, SLC5A5, SLC5A8, SSTR2, SSTR5, TFG, TG, THRA, THRB, TPM3, TPO, TRIM24, TRIM33, TSHR, VEGFA, WRN, ZMYM2, ZNF331
Adrenal adenoma	APC, GNAS
Turcot syndrome	APC, MLH1, NF1, PMS2
Hyperlipoproteinemia	APOA1, APOA5, APOC2, APOE, LDLR, LPA, LPL, RP1
Hypertriglyceridemia	APOA1, APOA5, APOC3, APOE, CD36, CYP7A1, DLK1, FABP2, FOXC2, FOXO1A, G6PC, INS, INSR, LIPC, LIPI, LPIN1, LPIN2, LPIN3, LPL, LTA, LTBR, NR1H4, PHKA2, RP1, SLC2A5, SMPD1, TGFB1, TNFSF14, TXNIP
Lipoprotein lipase deficiency	APOA5, LPL
Hyperalphalipoproteinemia	APOB
Hypobetalipoproteinemia	APOB
Abetalipoproteinemia	APOB, KEL, MTTP, P4HB, XK
Steatocystoma multiplex	APOB, KRT17

Viral infection	APOBEC3G, B3GALNT1, BLM, BNIP1, BNIP2, BNIP3, BTK, CALCOCO2, CCR5, CD27, CD274, CD8A, CD9, CREBBP, DCD, DDX58, DNAJC3, EIF2AK2, EP300, ERVWE1, FADD, FAH, FRAT1, GAB3, GLIPR1, GOLPH2, GTF3C2, GTF3C3, GTF3C4, GTF3C5, HHLA2, HHLA3, HLA-A, HLA-DQB1, HNRPUL1, IDE, IFI44, IFIH1, IFNAR1, IFNB1, IKBKE, IKZF1, IL10, IL15, IL28A, IL28B, IL29, IRAK4, IRF3, IRF5, IRF6, IRF7, IRF8, KIR3DL1, KLRC4, LGALS3BP, LILRA5, MICB, OAS1, PDCD1, PROS1, RNF26, SEPP1, SERPINB9, SFTPD, SH2D1A, SLC25A2, SOCS1, SPP1, STAT1, STAU1, TBK1, TLR3, TLR7, TRIM27, TRIM54, TRIM55, TRIM63, WT1, ZNF175
Memory impairment	APOC1, BACE1, GABBR1
Myotonic dystrophy	APOC2, BCAM, CDC42BPA, CDKN1A, CIT, CKM, CLCN1, CNBP, CTCF, CUGBP1, CUGBP2, DMPK, FCGRT, FMR1, FUT2, FXN, HD, IGFBP5, IGKC, INSR, KLK1, MBNL1, MBNL2, MBNL3, MSH2, MTMR1, PEPD, PHLDA1, PMP22, PVR, RSHL1, SIX5, SYMPK, TNNT1, VASP
Smith-Lemli-Opitz syndrome	APOE, DHCR7, EBP, GRM8, LBR, SHH
AIDS	APP, AQR, BAX, CCL3, CCL3L1, CCL5, CCL7, CCR2, CCR5, CD4, CD40LG, CD46, CGB, COCH, CX3CR1, CXCL11, CXCL12, CXCR4, CXCR6, DARC, DEK, DIABLO, DPP4, FMOD, GC, GDF8, GPI, GPR44, HLA-A, HLA-B, HLA-C, HLA-DQA1, IFNG, IFNGR1, IL10, IL12A, IL4R, IL8RA, KIR3DL1, LEP, LGALS3BP, LTC4S, LUM, MAPK14, MBL2, MST1R, MYL6, NFKB1, NFKB2, PAX5, PPAR, PSEN1, PTGS1, PTGS2, PYGL, RHOA, ROCK1, SIGLEC5, SLC12A2, SPN, TARBP1, TARBP2, TARDBP, TCL1A, TNFSF11, TRIM5, ZFP36
Pick disease	APP, B4GALNT1, CAPN2, CLU, JUN, LIPA, MAPT, NPC1, NPC2, PSAP, SERPINA1, SMPD1, STARD3, UBB
Cerebral amyloid angiopathy	APP, CST1, MMP9, TGFB1
Supranuclear palsy	APP, MAPT, RELN, UBB
Cancer susceptibility	APRIN, AURKA, AXIN2, BRCA1, BRCA2, BRIP1, C13orf24, CASP8, CDH1, CDKN1B, CHEK2, CYP19A1, DDB2, DIS3, EDEM3, ELAC2, FANCD2, FANCG, MBD4, MLH1, MLH3, MMP8, MSH2, MSH6, MYBL2, PALB2, PLA2G2A, PRDX2, PTPRJ, RAD51, RGS8, SMAD4, STK11, XRCC2, ZC3H12D, ZNF350
Lesch-Nyhan syndrome	APRT, CACNA1D, F8, HPRT1
Chronic granulomatous disease	APRT, CFTR, CUTL1, CYBA, CYBB, DMD, G6PD, GALNS, IFNGR1, KEL, NCF2, NCF4, PHKA2, RP2, SERPINA1, SRPX, XG, XK
Aquaporin-1 deficiency	AQP1
Dyserythropoietic anemia	AQP1, CATSPER2, CDAN1, GATA1, MAN2A1, SLC4A1, STRC, UROD, ZFPM1
Diabetes insipidus	AQP2, AQP3, AQP4, ARHGAP4, AVP, AVPR1A, AVPR1B, AVPR2, CLCNKA, GPR1, MC2R, TBXA2R, UBB
Multiple sclerosis	AQP4, BIRC5, CBLB, CD24, CD40, CD46, CIITA, CNP, CRYAB, CST3, CXCL11, CXCR3, DPP10, ERVWE1, FOXP3, HAVCR1, HAVCR2, HLA-C, HLA-DQA1, HLA-DQB1, HLA-DRA, HLA-DRB1, HLA-DRB5, ICOS, IGKC, IL12A, IL12B, IL17A, IL1B, IL1RN, IL22, IL23A, IL7R, ITGA4, KCNA1, KCNA3, LMNB1, LRP1B, MAPK8, MBP, MMP9, NOV, NRG1, OLIG1, PDCD1, PTPRC, PTPRZ1, RTN4, SLAMF1, SPP1, TNF, TNFSF10, TNFSF13B, TRA@, UBASH3A
Thyroid hormone resistance	AR, STX16, THRA, THRB
Periventricular heterotopia with microcephaly	ARFGEF2
Heterotopia	ARFGEF2, DCX, FLNA, FLNB, IDH3G, PAFAH1B1, PEX5, TUBA1A
Argininemia	ARG1, ARG2

Microphthalmia	ARHGAP6, ATF4, BCOR, CASP3, CHX10, CLCN4, CRYAA, CRYBA4, CTSK, DPYD, ENTPD2, FANCA, FANCD2, FANCI, FCMD, FRAS1, FRS2, GDF6, GJA8, HCCS, HESX1, IDH1, KIT, LRP6, MAF, MFRP, MITF, MSX2, NDP, NEBL, PAX2, PAX3, PDE6B, PIAS3, PIGA, PITX3, RAX, RB1, RYK, SHH, SIX6, SLC2A1, SNX3, SOX2, SOX9, TFAP2A, TFEC, TRPM1
Borjeson-Forssman-Lehmann syndrome	ARHGEF6, FGF13, PHF6, SOX3
Hyperekplexia	ARHGEF9, GLRA1, GLRB, GPHN, SLC6A5
Corneal dystrophy	ARID1A, CHST1, CHST5, CHST6, CLK2, COL4A3, COL8A2, DCN, GLA, KRT12, KRT3, NTRK1, PAX6, PIP5K3, PRKAA2, SH3BP4, SLC4A11, SP3, TACSTD2, TGFB1, VSX1, ZEB1
Prader-Willi syndrome	ARID4A, ARID4B, ATP10A, AVP, CD36, CYFIP1, F11, GABRA5, GABRB3, GGT1, GHRL, HERC2, HTR2C, LEP, LEPR, MAGEL2, MECP2, MKRN3, NDN, NDNL2, NIPA1, NIPA2, PCSK2, PHLDA2, PPY, SCG5, SNRPN, TJP1, TUBGCP5, UBE3A, ZDHHC15
Angelman syndrome	ARID4A, ARID4B, ATP10A, CDKL5, CUL4B, GABRA5, GABRB3, HERC2, MECP2, NDNL2, PHLDA2, SDHD, SNRPN, TJP1, TSPAN32, TSSC4, UBE3A
Bardet-Biedl syndrome	ARL13B, ARL6, BBS1, BBS10, BBS12, BBS2, BBS4, BBS5, BBS7, BBS9, CCDC28B, EHD1, G6PC2, HOXD10, MKKS, MYO9A, NR2E3, PLCB3, PLLP, RCN2, TRIM32, TTC8, TUB, VANG12
Cleft palate	ARNT, ARVCF, CASK, CDH1, CDKN1C, CHL1, COL11A2, COL2A1, DHCR7, DLX2, EPHB2, EPHB3, FGF10, FGFR2, FLNA, FOXC2, FOXE1, GABRB3, GAD1, GAS1, GSK3B, HIC1, HOXA7, HOXB6, IDH1, INHBA, INHBB, IRF6, ITGAV, JAG2, KAL1, KLHL4, MNT, MSC, MSX1, MYST3, NEBL, PHF8, PITX1, PQBP1, PVRL1, RARA, RB1, SATB2, SC5DL, SUMO1, TBX1, TBX19, TBX22, TBX5, TCF21, TGFB3, TGFB3, TGFB3, TP73L, UFD1L, ZEB2
Metachromatic leukodystrophy	ARSA, ARSE, CAPN3, CYP17A1, GJB2, GM2A, LIPA, PSAP
Fabry disease	ARSA, CD1D, CTSA, FUCA1, GLA, NOS3
Maroteaux-Lamy syndrome	ARSB, ARSE
Mucopolysaccharidosis	ARSB, ARSE, CTSA, GALNS, GNS, GUSB, HGSNAT, IDS, IDUA, NAGLU, SGSH
Chondrodysplasia punctata	ARSD, ARSE, ARSF, BGLAP, BGN, CD99, EBP, GNPAT, GPR143, KAL1, PEX6, PEX7, PRKX, STS, XG
Lissencephaly	ARX, ATR, CRK, DCAMKL1, DCX, HIC1, OFD1, PAFAH1B1, PAFAH1B3, PAFAH2, POMGNT1, POMT1, POMT2, PTK2, RELN, RP1, TBL1X, TCOF1, TUBA1A, VLDLR, YWHAE
Polydactyly	ARX, BBS10, BBS12, BHLHB3, DACH1, EFN1, EVC, FBLN1, FIGN, GLI3, GRIP1, HOXA11, HOXA13, HOXD10, HOXD13, IHH, LMBR1, MIPOL1, MKKS, MKS1, NFIA, PAX1, PHOX2A, PHOX2B, PRRX1, PRRX2, RAB23, RASSF8, SHH, SHOX2, TMEM67, TRIM32, TWIST1, WNT1
Cleidocranial dysplasia	ARX, BGLAP, CBFB, MSX2, RFXAP, RUNX1, RUNX2, SUPT3H
Synpolydactyly	ARX, BHLHB3, FBLN1, HOXA11, HOXA13, HOXD13, PHOX2B, RASSF8, SHOX2
Holoprosencephaly	ARX, C14orf11, CAD, CASP2, CDON, CHRD, DKK1, FUZ, GAS1, GDF1, GLI2, INTU, LRP2, LSS, NOG, PTCH1, PWP2, RB1, RHEB, RUNX2, SHH, SIM2, SIX3, STIL, TGIF1, TMEM1, VIPR2, ZFP161, ZIC2
Farber lipogranulomatosis	ASAHI
Central hypoventilation syndrome	ASCL1, BDNF, EDN3, PHOX2B, RET
Tay-Sachs disease	ASPA, CTSA, F11, GLB1, GM2A, HEXA, NTRK1
Canavan disease	ASPA, SOD2

Syndactyly	ASPH, CACNA1C, DLX5, FANCE, FBN2, FGFR2, FGFR3, FMN1, FREM2, FTO, GDF6, GJA1, GLI3, GRIP1, HOXD1, HOXD13, IHH, JAG2, LBR, LMBR1, LRP4, MAP2, MYBPC3, MYCN, PSMD7, PTCH1, RAB23, SHFM1, SHH, TF, TUB, UFD1L
Alveolar soft-part sarcoma	ASPSCR1
Histiocytoma	ATF1, FUS, MFHAS1, RB1, SSX1, TSPAN31
Coffin-Lowry syndrome	ATF4, RPS6KA3
Machado-Joseph disease	ATN1, ATXN3, DNAJB1, HAP1, RAD23A, RAD23B, TBP
Myoclonic epilepsy	ATN1, BRD2, CACNB4, CHRNA7, EFHC1, EPM2A, GABRA1, GABRD, JRK, NHLRC1, PAQR8, SCN1A, SLC25A22
Autism	ATP10A, AUTS2, CACNA1C, CACNA1D, CADPS2, CTTNBP2, DCUN1D1, DCX, DPYD, EN2, FOXP2, GABRA4, GABRB3, GLO1, GRPR, HOXA1, ITGB3, MAP2, MED12, NBEA, NLGN3, NLGN4X, OPRM1, RAPGEF4, SDC2, SHANK3, SLC25A12, SLC6A4, ST7, TH, WNT2
Alternating hemiplegia of childhood	ATP1A2
Migraine	ATP1A2, ATP1A4, CACNA1A, CALCA, DBH, HTR1B, HTR1D, HTR1F, HTR2A, HTR3A, INSR, NFKB1, NOS2A, SCN1A, SLC1A3
Brody myopathy	ATP2A1
Darier disease	ATP2A2, ATP2C1
Hailey-Hailey disease	ATP2C1
Ceroid lipofuscinosis	ATP5G1, CLCN3, CLCN6, CLCN7, CLN5, CLN6, CLN8, CTSD, MFSD8, PPT1, PPT2, TPP1
Occipital horn syndrome	ATP7A
Cutis laxa	ATP7A, COL1A2, EFEMP2, ELN, FBLN5, LAMB1, LOX
Oligodendroglioma	ATP8A1, DMBT1, EGFR, MMP24, NKX6-2, OLIG1, OLIG2, PIK3CA, PLCD4, TRIM8
Hypercholanemia	ATP8B1, BAAT, CLDN1, EPHX1, TJP2
Seckel syndrome	ATR
Williams-Beuren syndrome	ATR, BAZ1B, BCL7B, CLIP2, EIF4H, ELN, FKBP6, GTF2I, GTF2IRD1, GTF2IRD2, GTF2IRD2B, HIP1, MLX, MLXIPL, SRCRB4D, STAG3, TBL2, YWHAG
LIG4 syndrome	ATR, LIG4
Miller-Dieker lissencephaly	ATR, OFD1, PAFAH1B1, PAFAH1B3, RELN, TBL1X, TCOF1, YWHAE
Juberg-Marsidi syndrome	ATRX
Rett syndrome	ATRX, BDNF, CACNA1D, CDKL5, DLX5, DLX6, GLUD2, GPM6B, HCCS, MAP2, MBD1, MECP2, NTNG1, SYN1
Paroxysmal nocturnal hemoglobinuria	ATRX, C9, CD55, CD59, PIGA, PIGF
Sex reversal	ATRX, CBX2, DMRT1, DMRT2, EFNB1, FGF9, MAGEB2, NR0B1, NR5A1, RSPO1, SAT1, SOX9, SRY, WNT4, WT1, XG
Alpha-thalassemia/mental retardation syndrome	ATRX, DNMT3B, MECP2, SOX8
McCune-Albright syndrome	ATRX, FOS, GHRH, GNAS, GPR1, PRKAR1A
Hypochromic microcytic anemia	ATRX, SLC11A2
3-methylglutaconic aciduria	AUH, OPA3

Arthrogryposis	AUTS2, CHRNG, ERBB3, FBN2, KLKB1, MYH8, PIP5K1C, SIGIRR, SOX10, TNNI2, TNNT3, TPM2, VPS33B
Nephrogenic syndrome of inappropriate antidiuresis	AVPR2
Oligodontia	AXIN2, MSX1, PAX9
Myeloproliferative disorder	AXL, CCDC6, CEP110, CSF2, CSF2RB, ETV6, FGFR1, FGFR1OP, FLT3, GATA1, HCK, JAK2, JUNB, LIF, MPL, PDE4DIP, PDGFRB, PIK3R2, PLAT, PTEN, RBL1, RNF6, RUNX1, RUNX1T1, USP8, ZMYM2
Peters anomaly	B3GALTL, CYP1B1, FGFR2, FOXE3, PAX6
Niemann-Pick disease	B4GALNT1, JUN, LIPA, NPC1, NPC2, PSAP, SMPD1, STARD3
Bleeding disorder	B4GALNT2, F10, F11, F13A1, F8, FGG, GP1BA, GP1BB, GP5, KLKB1, LAT, LMAN1, MCFD2, MMRN1, P2RX1, P2RY12, PTGS1, SELP, SERPINA1, TBXA2R, VWF
von Willebrand disease	B4GALNT2, F8, GP1BA, PROC, VWF
Ellis-van Creveld syndrome	BAPX1, CRMP1, EVC, EVC2, HOXD10
Rieger syndrome	BARX1, BARX2, CASP6, DLX2, FGD1, PITX2, SHOX2
Iridogoniodysgenesis	BARX1, PITX2
Wilms tumor	BBS9, BCR, BUB1B, CASP3, CAT, CD59, CD82, CDKN1C, CIAO1, DPEP1, EIF2C1, FATE1, G6PC, GPC3, GPR137B, GTF3A, HACE1, HRAS, HTR2A, IGF1R, IGF2, LUZP2, MEN1, MPPED2, MRPL23, NAP1L4, NOV, NR4A3, PAWR, PAX2, PAX6, PFDN4, POU4F2, POU6F2, PPP2R1B, PTH, RASSF1, RB1, RPL10, RRM1, SET, SLC22A18, SMARCB1, UBE2I, WFDC1, WIT1, WT1, WTAP, ZNF124, ZNF174, ZNF75
Estrogen resistance	BCAR3
Maple syrup urine disease	BCAT2, BCKDHA, BCKDHB, DBT, DLD, DLST, HMGCL
MALT lymphoma	BCL10, BCL6, FOXP1, IGHG1, MALT1
Mesothelioma	BCL10, CACNA1C, CDKN2A, CDKN2B, DIO2, FGF6, GCLM, HRAS, LGALS3, MSLN, NF2, NRAS, SOCS3, STT3A, THBD, WT1
Germ cell tumor	BCL10, CTAG1B, DND1, DPPA3, FGF4, INSL3, MGMT, PLCB3, SLC26A8, ST3GAL2, STXBP5L, XAGE1, ZPBP2
Polycythemia	BCL2L1, BPGM, CBFA2T2, CD177, CSF2RB, EPOR, HBB, HIF1A, JAK2, MPL, VHL
Multiple myeloma	BCL6, CASP3, CCND1, DKK1, FCRL4, FCRL5, FGFR1, FGFR3, IGHG1, IL6, IRF4, KRAS, LIG4, MAGED1, MYEOV, NRAS, PARP1, PPP1CA, SAMSNI, TACC3, TNFRSF11B, TNFSF10, TNFSF11, WHSC1, WWOX, XBP1
Oculofaciocardiodental syndrome	BCOR
GRACILE syndrome	BCS1L
Drug addiction	BDNF, CCKAR, DRD3, FAAH, GABBR2, GPR1, GPR3, MAPK3, OPRD1
Bipolar disorder	BDNF, CLOCK, DAOA, DISC1, DNMT1, GNAL, GRIA3, GSK3B, HTR4, IMPA1, IMPA2, KCNN3, MAOA, NOS1, SLC13A5, SLC6A3, SYBL1, SYNJ1, TCF4, TPH2, TRPM2, XBP1
Hirschsprung disease	BDNF, DSCAM, ECE1, EDN3, EDNRB, ERBB2, FECH, FLT4, GDNF, GFRA1, GFRA2, GFRA3, ITGB2, KIAA1279, MITF, NRTN, PAX3, PHOX2B, RET, SOX10, TCF4, TITF1, ZEB2
Vitelliform macular dystrophy	BEST1, BEST4, DDB1, PRPH2, ROM1, SYT7, VMD2L1, VMD2L3
Incontinentia pigmenti	BGN, CTAG1B, CTAG2, F8, IKBKG, NFKB1, NFKB2, RELA
Dyskeratosis	BGN, DKC1, MAGEA1, MPP1, PUS1, TERT, XPC

Pulmonary fibrosis	BID, BLMH, CAV1, CXCL12, DTNBP1, ELMOD2, HPS4, ITGAV, ITGB6, MMP7, NF1, NOS2A, PSEN2, SFTPA1, TERT, TGFB1
Spinal muscular atrophy	BIRC1, CDH12, CNTF, CTF1, GM2A, HNRPR, IGHMBP2, KPNB1, LIX1, MAP1B, RAB1A, SCO2, SERF1A, SETX, SFRS10, SFRS9, SIP1, SMN1, SMN2, SMNDC1, SOD1, TGFB1, VAPB, ZNF259
Li-Fraumeni syndrome	BIRC5, CHEK2, SMARCB1
Fanconi anemia	BLM, BRCA2, BRIP1, DKC1, DNM2, EIF2AK2, FANCA, FANCB, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, KIT, MX1, NBN, PALB2, PARP1, PSPHL, RAD51, RB1, SMARCA4, UBE2T, XPA, ZBTB32
Bloom syndrome	BLM, BRCA2, DNMT1, ERCC1, ERCC2, FANCI, LIG1, RB1, RECQL, RECQL4, TERF1, TERF2, TOP3A, WRN, XPA, XRCC6
Werner syndrome	BLM, EXO1, FDFT1, FEN1, FGFR1, LMNA, LOXL2, MMP1, NRG1, POLB, RBPMS, RECQL, RECQL4, WRN
Rothmund-Thomson syndrome	BLM, RECQL, RECQL4, WRN
Albinism	BLOC1S3, CLCN4, CNO, DTNBP1, GPR143, GPX1, HPS3, HPS4, MC1R, OCA2, OFD1, PAFAH1B1, RAB38, RABGGTA, SHROOM2, SLC45A2, TBL1X, TCOF1, TYR, TYRP1, XG
Holt-Oram syndrome	BMP7, CART1, EOMES, FANCI, MYH6, NKX2-5, SALL4, TBX1, TBX18, TBX19, TBX22, TBX3, TBX5, WWTR1
Cowden disease	BMPR1A
Spermatogenic failure	BOLL, CDC25A, DAZ1, DAZL, FSHR, JARID1D, USP9Y
Azoospermia	BOLL, CYP21A2, DAZ1, DAZ2, DAZ3, DAZL, EPAS1, FSHR, IL9R, MTMR2, PANK2, POLG, RBM3, RBMX, RBMY1A1, SCP2, SPATA4, USP26, USP9Y, ZNF331
Erythrocytosis	BPGM, CASP8, CD177, CSF2RB, EGLN1, EPOR, HBB, JAK2, MPL, SOCS3
Hemangioma	BRAF, CTSA, DIO3, EMCN, FUS, IFNA2, KDR, MED28, PIK3CA, VHL
Costello syndrome	BRAF, HRAS, KRAS
Papillary serous carcinoma of the peritoneum	BRCA1
Xeroderma pigmentosum	BRCA2, DDB1, DDB2, ERCC1, ERCC2, ERCC3, ERCC4, ERCC5, ERCC6, FANCA, FANCI, FANCM, GTF2H1, MC1R, POLH, PTCH1, RAD23A, RAD23B, TERF2, UVRAG, XPA, XPC
Generalized epilepsy	BRD2, CACNA1A, CACNB4, CLCN2, GABRA1, GABRD, GABRG2, GRIK1, GRINA, ICAM5, KCNMA1, ME2, SCN1A, SCN1B
Charcot-Marie-Tooth disease	BSCL2, CANX, CCT4, COX10, DNM2, DVL1, EGR2, ELAVL4, FBXW10, GARS, GDAP1, GJA12, GJB1, HOXD10, HSPB1, HSPB8, KIF1B, LMNA, MFN2, MPZ, MTMR2, NDRG1, NEFL, PLP1, PMP22, PRPS1, PRX, REN, SBF2, SCN2B, SH3TC2, SOX10
Silver spastic paraplegia syndrome	BSCL2, NXF1, RTN3, STX5
Bartter syndrome	BSND, CASR, CLCNKA, CLCNKB, KCNJ1, KCNJ2, SLC12A1
Biotinidase deficiency	BTD
Agammaglobulinemia	BTK, CENPI, DRP2, GTF2I, IGHM, IGLL1, ITK, LRRC8A, PIK3R1, PLCD1, TCN2, TXK, WAS
Isolated growth hormone deficiency	BTK, GH1, GHRH, GHRHR, HESX1
Sarcoidosis	BTNL2, CD209, HLA-DPB1, NOD2, NOS2A, SLC11A1
Mast cell leukemia	C19orf59, FLT3, KIT, RASGRP4
Nasopharyngeal carcinoma	C1orf102, COX7B2, LOH3CR2A, MYC, NUDT5, PLUNC, RASSF4, UBAP1
Kindler syndrome	C20orf42

Meningococcal disease	C6, C8B, CD46, CFD, MBL2, TLR4, TNF
Trichothiodystrophy	C7orf11, ERCC2, ERCC3, GTF2H1, GTF2H5, XPA
Myasthenic syndrome	CACNA1A, CACNB2, CHAT, CHRNA1, CHRNA1, CHRND, CHRNE, DOK7, LAMB2, MUSK, RAPSN, SCN4A, STX1B1
Episodic ataxia	CACNA1A, CACNB4, KCNA1, KCNAB1, KCNMA1, SLC1A3
Timothy syndrome	CACNA1C
Medullary thyroid carcinoma	CACNA1H, CALCA, CHGA, CTAG1B, NRAS, RET, RREB1, SCN9A, SSTR2, SSTR5
Malignant hyperthermia susceptibility	CACNA1S, CACNA2D1, CACNG1, RYR1, RYR2
Hypokalemic periodic paralysis	CACNA1S, KCNE3, SCN4A, TOR1A
Cone dystrophy	CACNA2D4, CNGA3, GUCA1A, KCNV2, PDE6H, RDH12, RLB1, RS1
Multiple endocrine neoplasia	CALCA, CCND1, CDKN1B, CHGA, DNAJC4, FGFR3, FRS2, HNRPA3, IAPP, MEN1, PLCB3, PPP1CA, PYGM, RET, SLC29A2, SLC3A2, STK11, TSC2, VDR, VEGFB
Major depressive disorder	CALCA, CREB1, GPR50, HTR2A, SLC6A4, TH, TPH2
Heart block	CALR, KCNA7, NKX2-5, SCN5A, SIX5, SOX6, TRIM21, TROVE2
Cystinosis	CARKL, CTNS
Parathyroid adenoma	CASR, CCND1, CDC73, CHGA, MEN1, NF1, PPP2R1B, PTH, SMAD3, VDR
Hyperparathyroidism	CASR, CDC73, CDKN1B, CYP27B1, GCM2, GHRHR, IL6R, MEN1, PTHLH, PTHR1, VDR
Hypercalciuria	CASR, CLCN5, CLDN16, G6PC, KCNJ1, PTH, SLC12A1, SLC17A1, SLC34A1, SLC34A3, TRPV5, WNK4
Rickets	CASR, CLCN5, CYP27B1, CYP2R1, CYP3A4, DHCR7, DMP1, ENPP1, FAH, FGF23, FGFR1, GLRA2, HNRPA1, HR, PDZK1, PHEX, SLC17A1, SLC34A1, SLC34A3, SLC4A1, VDR
Hypocalcemia	CASR, CTRC, CYP24A1, CYP27B1, CYP2R1, GCM2, GPR1, HNRPA1, PHEX, TBX1, TRPM6, UFD1L, VDR
Hypocalciuric hypercalcemia	CASR, GPR1
Keratoconus	CAT, CHST6, CTSL2, FBN2, NTRK1, OPN1MW, SP3, TIMP1, VSX1
WAGR syndrome	CAT, ELP4, FSHB, PAX6, RAG1, WT1
Rippling muscle disease	CAV3, CDC42BPA
Miyoshi myopathy	CAV3, DYSF
Atopy	CBARA1, CCL11, CCL24, CMA1, FLG, HAVCR1, IL12B, IL4R, MS4A2, PHF11, PLA2G7, SART1, SCGB1A1, SELP, SPINK5, STAT6, TPT1
Pancreatitis	CBS, CCR1, CPB1, CTRC, CTSB, G6PC, GSTM1, HMGCL, IGF2BP3, IKBKB, LPL, LRP2, PRSS1, PRSS2, REG1A, REG3A, SPINK1, SPINT2, TM4SF5, TMPRSS4, UBR1, VAMP8
Transcobalamin II deficiency	CBS, DHFR, TCN2
Venous thrombosis	CBS, F2, HRG, LPA, NF1, NNMT, PIGA, PIGF, PLAT, PLG, PROC, PROS1, PROZ, SERPINA10, SERPINC1, SERPIND1, SERPINE1, THBD
Campomelic dysplasia	CBX2, SOX11, SOX9
Rhabdoid tumors	CCND1, RAB36, RTDR1, SMARCB1
Mycobacterial infection	CCR5, CD36, CD44, IFNGR1, IL12B, IL12RB1, SCARB1, SLC11A1

Hemophilia	CCR5, COL4A5, CYP21A2, DMD, F12, F3, F8, F9, G6PD, HPRT1, IDS, IL10, IL4R, MCF2, MPP1, OPN1MW, PROC, PROS1, SELP, SOX3, VWF, XG
Emphysema	CCR6, ELN, FBLN5, FLCN, FUT8, HFE, HMOX1, IL13, ITGAV, ITGB6, KL, LAMB1, LOXL1, LTBP4, MMP12, MMP9, NFE2L2, PRTN3, SERPINA1, SERPINE2, SFTPC, SFTPD, TGFB2, TLR4
Insensitivity to pain	CCT4, NTRK1, SCN9A
Epidermolysis bullosa	CD151, COL17A1, COL1A1, COL7A1, CYP21A2, DSP, FREM1, GPT, GRIP1, ITGA6, ITGB4, KRT1, KRT12, KRT14, KRT2, KRT5, KRT9, LAMA3, LAMB2, LAMB3, LAMC1, LAMC2, MMP1, NID1, PLEC1, PROC, PROS1
Thrombocythemia	CD177, JAK2, THPO
Leprosy	CD1B, CORO1A, DAG1, ERBB2, HLA-DRB1, IL10, IL12RB2, LILRA2, LTA, NAT2, PACRG, SLC11A1, TLR1, TLR2, TNF
BCG infection	CD209, IFNGR1, IL12B, IL15, STAT1
Leukocyte adhesion deficiency	CD226, GMD5, IL8RB, ITGB1, ITGB2, ITGB3, SELE, SLC35C1, TSTA3
Wiskott-Aldrich syndrome	CD247, COBL, MSN, MTSS1, PAK1, RAC1, SLC35A2, SPN, STS, SYP, TRIP10, WAS, WASF1, WASF2, WASF3, WASL, WIPF1, WIPF2
Sezary syndrome	CD27, CTAGE1, MCTS1, TRA@
Autoimmune thyroid disease	CD4, CTLA4, FCRL3, IL4, LMOD1, LRP2, PTPN22, SLC26A4, TG, TPO, TSHR, XRCC6
CD59 deficiency	CD59
Ectodermal dysplasia	CDH1, CDH3, EDA, EDAR, EDARADD, GJB6, IKBKG, KRT14, KRT6B, KRT85, NFKB1, NFKB2, NFKBIA, PKP1, PVRL1, RELA, TP73L, TRAF6, WNT10A
Hypotrichosis	CDH3, CDSN, DSG4, LIPH, SOX18, ST14, TGIF1
Infantile spasm syndrome	CDKL5
Lipoma	CDKN1B, CYP21A2, DDIT3, HMGA1, HMGA2, IFNG, LHFP, LIPE, LPP, MEN1, SDHD, THRSP, TSC1, TSC2, TSPAN31
Simpson-Golabi-Behmel syndrome	CDKN1C, GPC3, IGF2, OFD1
Peutz-Jeghers syndrome	CDX2, PTPRH, SMAD4, STK11, STK11IP
Specific granule deficiency	CEBPE
T-cell lymphoblastic leukemia	CETN2, EXOSC9, NOTCH1, PICALM, SMAD3
Statins	CETP, CRP, CST1, CST2, CST3, CST4, CST5, CST6, CST7, CST8, CTSE, CYP3A5, DEFA4, HMGCR, HTN1, HTN3, KNG1, LCN1, LDLRAP1, SOAT1
Properdin deficiency	CFB, CFP
Double-outlet right ventricle	CFC1, CITED2, GATA4, GDF1, NKX2-5, ZFPM2
Heterotaxy	CFC1, GJA1, ZIC3
Kaposi sarcoma	CGB, FGF4, HIST2H2AA3, HIST2H2BE, HLA-A, IL6, IL6ST, ITGA3, ITGB1, MAPKAPK2, NDUFA13, OSM, SLC7A11, VWF
CHARGE syndrome	CHD7, SEMA3E
Chitotriosidase deficiency	CHIT1
von Hippel-Lindau syndrome	CHL1, MST1, NF1, PSMC3, VBP1, VHL
Choroidal dystrophy	CHM
Cornelia de Lange syndrome	CHRD, GSC, NAALADL2, NIPBL, PAPP, SHOX2, SMC1A, SMC3

Nicotine addiction	CHRNA4
Anophthalmia	CHX10, FRS2, GDF6, HESX1, PAX6, RAX, SIX6, SOX2, STRA6
MHC class II deficiency	CIITA, RFX5, RFXANK, RFXAP
Lumbar disc disease	CILP
Tetralogy of Fallot	CITED2, DSCAM, GDF1, JAG1, NKX2-5, NTF3, ZFPM2
Cold-induced sweating syndrome	CLCF1, CRLF1
Muscle hypertrophy	CLCN1, DMD, IGF1, KY, NFATC1, PPP3CA
Myotonia congenita	CLCN1, KCNE3, SCN4A
Ocular albinism	CLCN4, GPR143, OCA2, OFD1, PAFAH1B1, SHROOM2, TBL1X, TCOF1, TYR, XG
Nephrolithiasis	CLCN5, CLDN16, G6PC, SLC4A1, UMOD, ZNF365
Dent disease	CLCN5, CUBN, MEN1, NOD2, OCRL, SERPINC1
Hypophosphatemic rickets	CLCN5, DMP1, ENPP1, FAH, FGF23, FGFR1, GLRA2, PDZK1, PHEX, SLC17A1, SLC34A1, SLC34A3
Gitelman syndrome	CLCNKB, SLC12A3
Hypomagnesemia	CLDN16, CLDN19, TRPM6
Adenosine deaminase deficiency	CMPK
Achromatopsia	CNGA3, CNGB3, GNAT2
Meniere disease	COCH
Spondylometaphyseal dysplasia	COL10A1
Hypochondroplasia	COL10A1, FGFR1, FGFR2, FGFR3, HAPLN1, MATN1
Metaphyseal chondrodysplasia	COL10A1, GPR1, PTHLH, PTHR1
Marshall syndrome	COL11A1
Stickler syndrome	COL11A1, COL11A2, COL2A1, COL9A1
Exostoses	COL11A2, EXT1, EXT2, EXTL1, EXTL2, F2, GRPR, SDC2, TRAP1
Knobloch syndrome	COL18A1
Caffey disease	COL1A1
Osteogenesis imperfecta	COL1A1, COL1A2, COL2A1, COL7A1, CRTAP, DCN, FBN2, LEPRE1, POU1F1, SMPD3, ZMPSTE24
Dermatofibrosarcoma protuberans	COL1A1, PDGFB
Kniest dysplasia	COL2A1
Porencephaly	COL4A1, PROC
Leiomyomatosis	COL4A5, COL4A6, FH, TSC1, TSC2
Bethlem myopathy	COL6A1, COL6A2, COL6A3
Ullrich congenital muscular dystrophy	COL6A1, COL6A2, COL6A3

Fuchs endothelial corneal dystrophy	COL8A2
Intervertebral disc disease	COL9A2
Smith-Magenis syndrome	COPS3, COTL1, DRG2, FLII, LLGL1, MFAP4, MYO15A, NT5M, RAI1, SHMT1, TOP3A, ZNF179
Leigh syndrome	COX10, DLD, GFM1, LRPPRC, NDUFS3, NDUFS8, PDSS2, SCO2, SDHA, SURF1, TUFM
Endometrial carcinoma	COX7A2L, EBAG9, MBD4, MSH3, MSH6, P2RY2, PAX2, PLAUR
Hyperproinsulinemia	CPE, INS, SCG5
Carboxypeptidase N deficiency	CPN1
Coproporphyrria	CPOX
Pigmented paravenous chorioretinal atrophy	CRB1
Adrenocorticotrophic hormone deficiency	CRH
Glucocorticoid deficiency	CRH, CYP21A2, MC2R, MRAP
Ulnar-mammary syndrome	CRY1, EOMES, TBX1, TBX18, TBX19, TBX22, TBX3, TBX5
Congenital cataracts	CRYAA, CRYAB, CRYBA1, CRYGC, CTDP1, EYA1, GCNT2, GJA8, HSF4, LIM2, PAX6, RAB3GAP2, SORD, TAF1
Alexander disease	CRYAB, GFAP
Thalassemias	CSH1, HBA1, HBB
Alagille syndrome	CST3, DLL3, JAG1, NOTCH1, NOTCH2, NOTCH3, RRBP1
Cystathioninuria	CTH, DGUOK
Pilomatricoma	CTNNB1, MUTYH
Mucopolipidosis	CTSA, GALNS, GNPTAB, GNPTG, IGF2R, MCOLN1, PNPLA6
Sialidosis	CTSA, GALNS, NEU1
Galactosialidosis	CTSA, NEU1
Tropical calcific pancreatitis	CTSB
Haim-Munk syndrome	CTSC
Chediak-Higashi syndrome	CTSC, HPS1, LRBA, LYST, NBEA, NID1, RAB7A, RAB9A, TYR
Periodontitis	CTSC, HTN1, IL18, IL1A, PRTN3, STATH
Papillon-Lefevre syndrome	CTSC, SPINK5
Pycnodysostosis	CTSK, MITF
Atrioventricular block	CTSL1, GJA5, KCNJ8, LMNA
Osteolysis	CXCL11, IFNB1, IL1A, MMP2, SERPINB5, TNFRSF11A, TNFSF11, ZMPSTE24
WHIM syndrome	CXCR4
Myotubular myopathy	CXorf6, MTM1, MTMR1, MTMR2, MTMR6, MTMR7, MTMR9
Lipoid adrenal hyperplasia	CYP11A1, NR5A1, STAR, TSPO
Aldosteronism	CYP11B1, CYP11B2, IL6, ITSN1, KCNE1, KCNJ1, MEN1, NR3C2, SCNN1A, SCNN1B, SCNN1G, WNK1, WNK4
Aromatase deficiency	CYP19A1

Hyperandrogenism	CYP21A2, INSL3, TNF, TNFRSF1B
Cerebrotendinous xanthomatosis	CYP27A1, CYP7A1
Bietti crystalline corneoretinal dystrophy	CYP4V2
Giant cell hepatitis	CYP7A1
Muscle-eye-brain disease	DAG1, FKRP, LARGE, POMGNT1, PTK2
Dopamine beta-hydroxylase deficiency	DBH
Dyslexia	DCDC2, DYX1C1, EPM2A, KIAA0319, ROBO1, TACR1
Subcortical laminar heterotopia	DCX
Myxoid liposarcoma	DDIT3, ERG, FUS, GLI1, STX1B1, TAF15, TSPAN31, WNT1
Conotruncal anomaly face syndrome	DGCR14, TBX1
Optic atrophy	DGKG, DNM1L, EIF2B5, ERCC6, HES1, MFN2, OPA1, OPA3, OPN1SW, PRPS1, SDHA, TIMM8B, TST
Mitochondrial DNA depletion syndrome	DGUOK, MPV17, PCK2, SUCLA2
Desmosterolosis	DHCR24
Goiter	DIO1, LGALS3, LRP2, MEN1, RPSA, SLC26A4, SLC5A5, TEK, TG, THRB, TITF1, TSHR
Hoyeraal-Hreidarsson syndrome	DKC1
Spondylocostal dysostosis	DLL3, JAG1, LFNG, MESP2, NOTCH3
Greig cephalopolysyndactyly syndrome	DLX5, GLI3
Ornithine transcarbamylase deficiency	DMD
Glycerol kinase deficiency	DMD, GK, GK2, GPD1, GPD2, IL1RAPL1, NR0B1
Becker muscular dystrophy	DMD, IL1RAPL1, MYF6, TGFB1
Ciliary dyskinesia	DNAH1, DNAH11, DNAH5, DNAH7, DNAI1, DNAI2, RPGR, RSHL1, TXNDC3
Kartagener syndrome	DNAH11, DNAH5, DNAH9, DNAI1, DYNC1H1, FOXJ1, INVS
Emery-Dreifuss muscular dystrophy	DNASE1L1, EMD, LMNA, MPP1, SREBF1, ZMPSTE24
Barth syndrome	DNASE1L1, FLNA, TAZ
Thymine-uraciluria	DPYD
Dihydropyrimidinuria	DPYD, DPYS
Blepharospasm	DRD5
Left ventricular noncompaction	DTNA, LDB3

Facioscapulohumeral muscular dystrophy	DUX4, FRG1, PDLIM3, SLC25A4
Smith-McCort dysplasia	DYM
CHILD syndrome	EBP, NSDHL
Micropenis	ECE1, GH1, RB1, SRD5A2
Lipoid proteinosis	ECM1, LDLR
Hypodontia	EDA, MSX1, PAX9, TP73L, WNT10A
Orofacial cleft	EDN1, SHFM1, SUMO1, TBX22
ABCD syndrome	EDNRB
Waardenburg syndrome	EDNRB, FN1, FOXO1A, HDLBP, HIRA, MITF, PAX3, PAX7, SHOX2, SILV, SNAI2, SOX10
Waardenburg-Shah syndrome	EDNRB, RB1, SOX10
Shah-Waardenburg syndrome	EDNRB, SOX10
D-bifunctional protein deficiency	EHHADH, HSD17B4
Wolcott-Rallison syndrome	EIF2AK3, EIF2B5
Leukoencephalopathy with vanishing white matter	EIF2B1, EIF2B2, EIF2B3, EIF2B4, EIF2B5
Ovarioleukodystrophy	EIF2B2, EIF2B4, EIF2B5
Trichorhinophalangeal syndrome	EIF3S3, EXT1, TRPS1
Shwachman-Diamond syndrome	ELA2, PIGA, SBDS, TPST1
Schizencephaly	EMX2, SHOX2
Enolase deficiency	ENO1, ENO3
Pyropoikilocytosis	EPB41, SPTA1, SPTB
Basal cell carcinoma	EPN3, FHIT, FOXE1, GLI1, GLI2, IL10, MC2R, MTSS1, PDGFRA, PTCH1, PTCH2, RASA1, RNF139, SHH, SMO
Cerebrooculofacioskeletal syndrome	ERCC1, ERCC6
Cockayne syndrome	ERCC2, ERCC3, ERCC5, ERCC6, ERCC8, POLR2A, TP53, WRN, XPA, XPC
Neuroectodermal tumors	ERG, LLGL1, NF1, PDGFRA, PVR, SMARCB1, TGFBR2, ZIC1
Roberts syndrome	ESCO2, INCENP, NIPBL, ZW10, ZWINT
Ethylmalonic encephalopathy	ETHE1
Weyers acrodermal dysostosis	EVC
Chondrosarcoma	EWSR1, EXT1, EXT2, NR4A1, NR4A3, PAPSS1, PAPSS2, TAF15, TCF12, TRPA1, XYLT1
Branchiootic syndrome	EYA1, SIX1
Oculodentodigital dysplasia	EYA4, GJA1
Factor x deficiency	F10

Placental abruption	F10
Dysprothrombinemia	F2
Hypoprothrombinemia	F2
Thrombophilia	F2, F5, HRG, PLAT, PROC, PROCR, SERPINA10, SERPINE1, TFPI, THBD
Hemorrhagic diathesis	F5, F8, SERPINF2, TCN2
Aplastic anemia	FANCI, GSTM1, GSTT1, IFNG, PIGA, PRF1, SBDS, TERT
Cafe-au-lait spots	FANCI, MLH1, MSH2, NF1, PTPN11
Chromosome 22q13.3 deletion syndrome	FBLN1
Shprintzen-Goldberg syndrome	FBN1, TGFB2
Split-hand/foot malformation	FBXW4, SHFM1, TP73L
Allergic rhinitis	FCAR, FOXP1, NGFB, PHF11
Wegener granulomatosis	FCGR3B, PRTN3
Walker-Warburg syndrome	FCMD, FKR1, LARGE, POMGNT1, POMT1, POMT2, RELN
Hypofibrinogenemia	FGA
Dysfibrinogenemia	FGA, FGB, FGG
Afibrinogenemia	FGA, FGB, FGG, SERPINF2
Aarskog-Scott syndrome	FGD1
Lymphedema	FGD1, FLT4, FOXC2, FOXL2, PDPN, PEPD, RELN, SOX18
Macrocytic anemia	FGD1, GATA1, KCNQ1, MTR, TCN2
Aplasia of lacrimal and salivary glands	FGF10
Pfeiffer syndrome	FGF8, FGFR1, FGFR2, FGFR3, RUNX2
Apert syndrome	FGFR1, FGFR2, FGFR3
Jackson-Weiss syndrome	FGFR1, FGFR2, FGFR3
Crouzon syndrome	FGFR1, FGFR2, FGFR3, NOG
Antley-Bixler syndrome	FGFR1, FGFR2, FGFR3, POR
Saethre-Chotzen syndrome	FGFR1, FGFR2, FGFR3, SNAI1, TCF3, TWIST1, TWISTNB
Kallmann syndrome	FGFR1, GNRH1, GNRHR, GPR143, KAL1, NELF, PNPLA4, PROK2, PROKR2, STS
Creutzfeldt-Jakob disease	FGFR2, HLA-DQB1, PRND, PRNP, SERPINA1, SPTA1
Muenke syndrome	FGFR3
Tall stature	FGFR3, MED12
Fumarase deficiency	FH
Multiple cutaneous and uterine leiomyomata	FH
Muir-Torre syndrome	FHIT, MLH1, MSH2
Hypereosinophilic syndrome	FIP1L1, IL5, PDGFRA, PRG2

Noncompaction of left ventricular myocardium	FKBP1A, TAZ
Birt-Hogg-Dube syndrome	FLCN
Netherton syndrome	FLG, SPINK5
Frontometaphyseal dysplasia	FLNA
Melnick-Needles syndrome	FLNA
Otopalatodigital syndrome	FLNA
Atelosteogenesis	FLNB, PAPSS2, SLC26A2
Piebaldism	FLT4, KIT, SNAI2
Fish-odor syndrome	FMO1, FMO3, FMO4
Cherubism	FMR1, SH3BP2
Axenfeld anomaly	FOXC1, PAX6
Yellow nail syndrome	FOXC2
Bamforth-Lazarus syndrome	FOXE1
Pendred syndrome	FOXI1, SLC26A3, SLC26A4
Enlarged vestibular aqueduct	FOXI1, SLC26A4
Duane syndrome	FOXL2
Fraser syndrome	FRAS1, FREM1, FREM2, GRIP1
Ovarian hyperstimulation syndrome	FSHR
Glutamate formiminotransferase deficiency	FTCD
Hyperferritinemia-cataract syndrome	FTH1, FTL, SLC40A1
Fucosidosis	FUCA1, FUCA2
Bombay phenotype	FUT1, FUT2
Exudative vitreoretinopathy	FZD4, LRP5
Norrie disease	FZD4, MAOA, MAOB, NDP, TIMP1
Hepatic adenoma	G6PC
Glycogenosis	G6PC, GAA, PHKA2, PRKAG2
Krabbe disease	GALC
Galactose epimerase deficiency	GALE
Galactokinase deficiency	GALK1, GALK2
GAMT deficiency	GAMT, GATM
Giant axonal neuropathy	GAN, MAP1B

Hereditary persistence of fetal hemoglobin	GATA1, HBB, HBG1, HBG2
Macrothrombocytopenia	GATA1, MYH9, RABGGTA, ZFPM1
AGAT deficiency	GATM
Glutaricaciduria	GCDH
Hyperphenylalaninemia	GCH1, PAH, PCBD1, PTS, QDPR, SPR
Adult i phenotype	GCNT2
Fibular hypoplasia and complex brachydactyly	GDF5
Synostoses syndrome	GDF5, NOG
Combined oxidative phosphorylation deficiency	GFM1, MRPS16, TSFM
Pituitary hormone deficiency	GH1, GHRHR, HESX1, LHX3, POU1F1, PROP1, RFXAP, SMPD2, SMPD3, SOX3
Acromegaly	GHRH, GHRHR, GHRL, GNAS, GPR1, MEN1, SSTR2, SSTR5
Intrinsic factor deficiency	GIF
Hypoplastic left heart syndrome	GJA1, PAH
Vohwinkel syndrome	GJB3, LOR
Pallister-Hall syndrome	GLI2, GLI3, HOXD10
Acrocallosal syndrome	GLI3
Glomuvenous malformations	GLMN
Startle disease	GLRA1
Choreoacanthocytosis	GNA14, SLC4A1, VPS13A
Osseous heteroplasia	GNAS
Pseudohypoparathyroidism	GNAS, GPR1, PTHR1, STX16, WNK1
Glanzmann thrombasthenia	GNB3, ITGA2, ITGA2B, ITGAM, ITGB1, ITGB2, ITGB3
Nonaka myopathy	GNE
Sialuria	GNE
Inclusion body myopathy	GNE, MYH2, VCP
Rhizomelic chondrodysplasia punctata	GNPAT, PEX6, PEX7
Bernard-Soulier syndrome	GP1BA, GP1BB, GP5, GP9, ITGA2
Molybdenum cofactor deficiency	GPHN, MOCS1, MOCS2
Oguchi disease	GRK1, RS1, SAG
Glutathione synthetase deficiency	GSS, LTC4S

Supravalvar aortic stenosis	GTF2I, LIMK1
Cortisone reductase deficiency	H6PD, HSD11B1
3-hydroxyacyl-CoA dehydrogenase deficiency	HADHA
HELLP syndrome	HADHA, HADHB
LCHAD deficiency	HADHA, HADHB
Trifunctional protein deficiency	HADHA, HADHB
Histidinemia	HAL
HPFH	HBB, HBG1, HBG2
Narcolepsy	HCRT, HCRTR2, HLA-DQB1, PTGDS
Septo optic dysplasia	HESX1
Sanfilippo syndrome	HGSNAT, NAGLU, SGSH
Abacavir hypersensitivity	HLA-B, HSPA1L
Keratitis	HLA-E, PAX6, PSEN2, TAT, XPC
Holocarboxylase synthetase deficiency	HLCS
Currarino syndrome	HLXB9
Salivary adenoma	HMGA2
Carnitine deficiency	HMGCL, IFT81, SLC22A5
Isovaleric acidemia	HMGCL, IVD
Heme oxygenase-1 deficiency	HMOX1
Athabaskan brainstem dysgenesis syndrome	HOXA1
Bosley-Salih-Alorainy syndrome	HOXA1
Guttmacher syndrome	HOXA13
Vertical talus	HOXD10
Alopecia universalis	HR
Atrichia with papular lesions	HR
Low renin hypertension	HSD11B2
2-methyl-3-hydroxybutyryl-CoA dehydrogenase deficiency	HSD17B10
Perineal hypospadias	HSD3B2
Seasonal affective disorder	HTR2A
ICOS deficiency	ICOS
Multiple sulfatase deficiency	IDS, STS, SUMF1

Acrocapitofemoral dysplasia	IHH
Paget disease	IL6, INPP5D, SQSTM1, TNFRSF11A, TNFRSF11B, VCP
Hypoadosteronism	IL6, ITSN1, KCNJ1, NR3C2, SCNN1A, SCNN1B, SCNN1G, WNK1, WNK4
Rabson-Mendenhall syndrome	INSR
Ketoacidosis	INSR, KCNJ11, PCCB
Senior-Loken syndrome	IQCB1, NPHP1, NPHP3, NPHP4, RPGRIP1
IRAK4 deficiency	IRAK4
Popliteal pterygium syndrome	IRF6
van der Woude syndrome	IRF6
May-Hegglin anomaly	ITGA2, MYH10, MYH9
Pseudohypoadosteronism	ITSN1, KCNJ1, NR3C2, SCNN1A, SCNN1B, SCNN1G, WNK1, WNK4
Epidermolytic hyperkeratosis	JUP, KRT1, KRT10, KRT12, KRT13, KRT2, KRT8, KRT9
Naxos disease	JUP, PDLIM3
Jervell and Lange-Nielsen syndrome	KCNE1, KCNQ1, KCNQ2
Thyrotoxic periodic paralysis	KCNE3
Hyperkalemic periodic paralysis	KCNE3, SCN4A
Paramyotonia congenita	KCNE3, SCN4A
Sorsby fundus dystrophy	KDR, RS1, TIMP3, VEGFA
Fructosuria	KHK
Goldberg-Shprintzen megacolon syndrome	KIAA1279
Prekallikrein deficiency	KLKB1
Kininogen deficiency	KNG1
Meesmann corneal dystrophy	KRT12, KRT3
White sponge nevus	KRT13
Pachyonychia congenita	KRT13, KRT16, KRT17, KRT6A, KRT6B
Monilethrix	KRT81, KRT83, KRT86
MASA syndrome	L1CAM
L-2-hydroxyglutaric aciduria	L2HGDH
Salla disease	LAMP1, SLC17A5
Pelger-Huet anomaly	LBR
Fish-eye disease	LCAT
Selective T-cell defect	LCK, ZAP70
Sclerosteosis	LDLR, SOST
Left-right axis malformations	LEFTY1

Buschke-Ollendorff syndrome	LEMD3
Osteopoikilosis	LEMD3
Leydig cell adenoma	LHCGR, TNXB
Cholesteryl ester storage disease	LIPA
Wolman disease	LIPA
Acheiropody	LMBR1
Osteoporosis-pseudoglioma syndrome	LRP5
van Buchem disease	LRP5, MEOX1, SOST
Dosage-sensitive sex reversal	MAGEB2, NR0B1, SAT1
Mannosidosis	MAN2B1, MANBA
Brunner syndrome	MAOA
Accelerated tumor formation	MBD4
UV-induced skin damage	MC1R
Methylmalonic aciduria	MCEE, MMAA, MMAB, MMACHC, MUT
Intrauterine and postnatal growth retardation	MEST, PAH
Fundus albipunctatus	MFRP, RDH12, RDH5
Keutel syndrome	MGP
McKusick-Kaufman syndrome	MKKS
Megalencephalic leukoencephalopathy with subcortical cysts	MLC1
Griscelli syndrome	MLPH, MYO5A, RAB27A
Malonyl-CoA decarboxylase deficiency	MLYCD
Central core disease	MMP14, RYR1, RYR2
Hypouricemia	MOCS2, NP, PRPS1, SLC22A12, UMPS
Sulfite oxidase deficiency	MOCS2, SUOX
Witkop syndrome	MSX1
Acrodermatitis enteropathica	MT1A, SLC39A4
Hyper-IgD syndrome	MVK
Neurofibrosarcoma	MXI1, NF1
Feingold syndrome	MYCN
Carney complex	MYH8, PRKAR1A
Epstein syndrome	MYH9

Fechtner syndrome	MYH9
Sebastian syndrome	MYH9
Myotilinopathy	MYOT
Kanzaki disease	NAGA
Schindler disease	NAGA
Slow acetylation	NAT1, NAT2
Liddle syndrome	NEDD4, SCNN1A, SCNN1B, SCNN1D, SCNN1G
Moyamoya disease	NF1
Schwannomatosis	NF2, SMARCB1
Nance-Horan syndrome	NHS
Asperger syndrome	NLGN3, NLGN4X, SHANK3, TBX1
CINCA syndrome	NLRP3
Cold-induced autoinflammatory syndrome	NLRP3
Muckle-Wells syndrome	NLRP3
Blau syndrome	NLRP3, NOD2
Situs ambiguus	NODAL, ZIC3
Tarsal-carpal coalition syndrome	NOG
Acromesomelic dysplasia	NOG, NPR2
Basal cell nevus syndrome	NPC1, PDGFRA, PTCH1, SHH, SMO
Benzene toxicity	NQO1
Enhanced S-cone syndrome	NR2E3, NRL
Cortisol resistance	NR3C1
Denys-Drash syndrome	NR5A1, PAX2, SRY, WT1
Adrenocortical insufficiency	NR5A1, STAR
Sotos syndrome	NSD1
Weaver syndrome	NSD1
Myoneurogastrointestinal encephalomyopathy syndrome	NT5M
Lowe syndrome	OCRL, PHEX, SMARCA1
Oral-facial-digital syndrome	OFD1, PAFAH1B1
Hemoglobin H disease	PAFAH1B1
HARP syndrome	PANK2
Diastrophic dysplasia	PAPSS2, SLC13A4, SLC26A2
Foveal hypoplasia	PAX6
Morning glory disc anomaly	PAX6

Optic nerve hypoplasia/aplasia	PAX6
Pancreatic agenesis	PAX6, PDX1
Pyruvate dehydrogenase deficiency	PDHB
Prolidase deficiency	PEPD
Peroxisomal biogenesis disorder	PEX1, PEX13, PEX7
Phosphoglycerate dehydrogenase deficiency	PHGDH
Polycystic liver disease	PKD2L1, PRKCSH, SEC63
Plasminogen deficiency	PLAT, PLG
Nevo syndrome	PLOD1
Bruck syndrome	PLOD2
Pelizaeus-Merzbacher disease	PLP1
Alpers syndrome	POLG
Retinoschisis	PPEF1, RS1
Renpenning syndrome	PQBP1
Hemophagocytic lymphohistiocytosis	PRF1, PTPRC, SH2D1A, STX11, UNC13D
Camptodactyly-arthropathy-coxa vara-pericarditis syndrome	PRG4
Wolff-Parkinson-White syndrome	PRKAG2, TNNI3
Gerstmann-Straussler disease	PRNP
Protein S deficiency	PROC, PROS1, SERPINC1
Antithrombin III deficiency	PROS1, SERPINC1
Enterokinase deficiency	PRSS1, PRSS7
Phosphoserine phosphatase deficiency	PSPH
Bannayan-Riley-Ruvalcaba syndrome	PTEN
Enchondromatosis	PTHR1
Leopard syndrome	PTPN11, RAF1
Mitochondrial myopathy and sideroblastic anemia	PUS1
Zlotogora-Ogur syndrome	PVRL1

McArdle disease	PYGM
EBD	RAB3A
Neutrophil immunodeficiency syndrome	RAC2
Capillary malformations	RASA1
Parkes Weber syndrome	RASA1
RAPADILINO syndrome	RECQL4
Mowat-Wilson syndrome	RET, ZEB2
Scurvy	RGN, SLC23A1
Bradyopsia	RGS9, RGS9BP
Gaze palsy	ROBO3
Townes-Brocks syndrome	SALL1, SALL4
Anderson disease	SAR1A, SAR1B
Chylomicron retention disease	SAR1A, SAR1B
Lathosterolosis	SC5DL
Sick sinus syndrome	SCN5A
Erythermalgia	SCN9A
Paragangliomas	SDHB, SDHD, TIMM8B
Merkel cell carcinoma	SDHD
Mohr-Tranebjaerg syndrome	SDHD, SLC25A12, SLC25A13, TIMM13, TIMM8A, TIMM8B
Esophageal cancer	SEPT10, ADAMTS9, C15orf48, C17orf28, CCDC110, CDKN2A, EVPL, GML, KIAA1524, LZTS1, OSR1, RNF34, RPS15, SEMA7A, SRP68, VSIG1
Squamous cell carcinoma	SEPT10, ATP8A2, BAGE, BAX, CALCA, CCBP2, CCDC110, CD82, CDK4, CDKN2A, CHST6, CHUK, CLU, COL7A1, CSMD1, CSMD2, CTAG1B, CTTN, CXCL14, DCC, DLL1, DSE, EIF4G1, ENOSF1, FAS, FGFBP1, FHL5, FOXE1, GNG2, GPC5, HGF, HMOX1, HRAS, HSPG2, IFNA17, IL10, ING1, ING3, ITGB4, JAG1, JAG2, JMJD2C, KRAS, LAMB3, LASS1, LY6D, MC2R, MYEOV, NDUFA12L, NF1, NFKBIA, NOTCH1, ORAOV1, PADI2, PCDHGB7, PLK3, PLK4, POLD1, PTCH1, PTGER2, PTGER4, PTGS2, PTHLH, RABGAP1L, RELA, RNF6, RSP01, SEMA3C, SERPINB3, SERPINB4, SERPINB5, SFN, SMAD4, ST7, STK11, TCF21, THBS2, TLE1, TMPRSS11E, TNFRSF10B, TP73L, XPA

Melanoma	SEPT4, A4GALT, AAMP, ADAM15, AHNAK, AIM1, AIM2, ANGPTL4, APAF1, APC, ASIP, ATF1, B2M, B3GALT1, B4GALT7, BAGE, BAMBI, BAX, BCL2, BIRC5, BIRC7, BMI1, BRAF, BRCA2, CAGE1, CASZ1, CBS, CCND1, CD244, CD248, CD274, CD44, CD63, CD81, CD8A, CD9, CDH1, CDK4, CDK6, CDKN2A, CDKN2B, CFLAR, CHMP4A, CITED1, CITED2, CLN3, COL4A3, CSPG4, CTAG1B, CTAG2, CTAGE1, CTNNB1, CUTL1, CXCL1, CXCL12, CXCL2, CXCL3, CXCR4, CXorf1, CYFIP1, DARC, DCD, DCT, DDIT3, DDX20, DIAPH1, DICER1, DMBT1, DSE, EDN1, EGF, EIF2C2, EMCN, EPB41L4B, EWSR1, EXT1, FAP, FASLG, FCRLM2, FGF4, FHL5, FN1, GADD45A, GAGE1, GAGE2, GAGE4, GAGE5, GAGE6, GAGE7, GAGE7B, GAGE8, GIPC3, GPNMB, GPR143, GPR56, GRM1, GSK3B, HGF, HHAT, HLA-G, HPS1, HPS4, HRAS, HSPG2, ID1, IFIH1, IFNA2, IGF1R, IL18, IL1B, IL24, IL31RA, IL8, ING1, ING2, IQGAP1, KAAG1, KDR, KISS1, KISS1R, LAMB1, LTF, LYPD3, MAGEA1, MAGEA10, MAGEA11, MAGEA12, MAGEA2, MAGEA3, MAGEA4, MAGEA5, MAGEA6, MAGEA8, MAGEA9, MAGEB3, MAGEB4, MAGEB6, MAGEC1, MAGEC2, MAGEC3, MAN2A2, MC1R, MC2R, MCAM, MDGA1, MF12, MIA, MIA2, MITF, MLANA, MLZE, MMD, MMP2, MOBK1B, MRPL28, MYB, NCAPG, NCK1, NCKAP1, NDOR1, NF2, NME1, NME4, NOMO1, NOTCH1, NR4A3, NUDCD1, OPRD1, OSM, PABPC1, PABPC3, PAGE1, PCDHB11, PCDHB16, PCDHGA5, PCDHGB7, PERP, PHF19, PLA1A, PLAGL1, PLEKHA4, PNMA1, PNN, PNPT1, POMC, PPHLN1, PPIL2, PPP2R1B, PRAME, PRDM2, PRKCA, PSIP1, PXDN, PYCARD, RAB27A, RAB27B, RAB30, RAB31, RAB38, RAB8A, RAC1, RAPH1, RB1, RHOC, ROS1, SART1, SCYE1, SDCBP, SEMA3F, SHROOM2, SILV, SLC24A5, SLC33A1, SLC45A2, SLC4A7, SMPD1, SNAI2, SOX10, SPANXC, SSTR2, SSTR3, SSTR5, SSX3, SSX4, SSX5, SSX6, SSX7, ST3GAL6, ST8SIA1, STK11, STMN1, TAL1, TF, TGFA, TIMP2, TMSB4X, TNFRSF11A, TNFRSF21, TNFSF11, TP53, TRPM1, TRPM5, TRPM8, TSPAN8, TYRP1, UGCG, USP18, VEGFA, VPS24, WIP1, XPA, XPC, XRCC3, ZNF202
Adenocarcinoma	SEPT4, ACVR1B, ADAMTS1, AKAP14, AKT1, AMHR2, ANGPT2, ANP32C, ANP32D, ANXA13, APC, APOBEC3C, APOBEC3D, BASP1, BCL10, BEST1, BIRC5, BRCA2, BTC, BYSL, C14orf1, CABLES1, CADM1, CAMK2N2, CCND1, CCRK, CDH1, CDKN2A, CEACAM5, CHEK2, COL23A1, CTAG1B, CTSB, CTSE, CTS1, CYR61, DACT2, DCC, DLL1, DOC2B, DPP4, DSE, DUSP6, DYNC1H1, ECE1, EDN2, EED, EGFR, EMP1, EMX2, EPB41L3, EPHB1, ERBB2, ERMAP, ESR2, FEN1, FLCN, FOXA1, GHRH, GHRHR, GNAI2, GNG7, HMOX1, HTR3E, HYAL2, IGF2BP2, IGF2R, IL10RB, IL12A, IL12B, IL20RA, IL22, IL22RA1, IL26, IQGAP1, JAG1, KLK6, KRAS, KRT9, LGALS3, LGALS4, MAP3K8, MCM4, MCM8, MMP7, MPG, MSH2, MTA1, MTHFD2, MTTP, MUC2, MYCL1, MYH7B, NAGPA, NAPS, NLRP1, NME1, NPB, NPW, NRG1, NTN1, NUDT4, PALLD, PARK2, PCDH7, PDZD3, PIK3CG, PIM2, PLA2G2A, PLA2G7, PPARA, PPARG, PRCC, PRDX3, PRSS36, PTGER2, PTGER4, PTGS2, PTPRU, QTRT1, RAB2B, RAD54L, RDH11, RPS3, RUTBC3, SCTR, SEL1L, SEPHS1, SEPHS2, SFRP1, SFRP2, SFRP4, SLC26A3, SMAD3, SMAD4, SNX5, SRD5A1, SRD5A2, SSTR2, SSX1, ST14, STK11, SULT1E1, TACSTD1, TACSTD2, TCIRG1, TFE3, TGFBI, TITF1, TJP2, TLE1, TM4SF4, TM4SF5, TMEM123, TMEM4, TNFRSF6B, TNFSF10, TNFSF14, TOP2A, TP53INP1, TRO, TROAP, TRPM8, TRPV6, TXNDC1, TXNRD1, USP4, VEGFA, VIP, WDR19, WISP1, WNT1, XPC, ZNF148
Stomach cancer	SEPT4, APC, BCL2A1, CDH1, FGF4, KRAS, PTPRH, RAF1
Neurodegeneration	SEPT5, AARS, ACCN1, AIFM1, APP, ARFIP2, ATG5, ATG7, ATP13A2, ATXN1, ATXN3, ATXN7, BAG5, BSCL2, CD4, CHRN2, CLCN3, CLCN7, CLN3, CLN5, CNP, CP, CREB1, DNAJB1, DST, EFHC1, FAS, FRAP1, GJA1, GLB1, GLUD2, GPR37, GSK3B, HAP1, HCRT, HD, HDAC6, HEPH, HSPA1A, HTRA2, IL3, IREB2, ITM2B, KIAA0274, MGRN1, NEFH, NMNAT1, NPC1, NPEPPS, OSTM1, PANK1, PANK2, PANK3, PANK4, PARG, PARK2, PAWR, PIN1, PLA2G6, PNPLA6, PQBP1, PRKCG, PRND, PRNP, PRPH, PSEN2, RAI1, SCN8A, SCNN1D, SERPINA1, SH3GL3, SIL1, SIRT1, SIRT2, SNCA, SPG7, STAT1, STUB1, SUMF1, TAF4, TGFB2, UCHL1, UCHL3

Leukemia	SEPT5, SEPT8, SEPT9, A4GALT, ABCB1, ABCB10, ABCB8, ABCC1, ABCC5, ABCC6, ABI1, ABI2, ABL1, ABL2, ABR, ACHE, ACSL6, ACTG1, ACVR1, ACVR1B, ADAM10, ADCY7, ADD3, AFF1, AFF2, AFF3, AFF4, AHI1, AK1, AKAP13, AKT1, ALAD, ALAS2, ALDH1A2, ALOX12, AMICA1, ANKRD21, ANKS1B, ANP32A, ANPEP, ANXA8, API5, APOBEC3C, APOBEC3D, APOBEC3G, AQP1, AQP7, AQP9, ARCN1, ARHGAP11A, ARHGAP15, ARHGAP20, ARHGAP26, ARHGAP9, ARHGEF12, ARHGEF7, ARID4A, ARID4B, ARIH2, ARNT, ASH1L, ASTL, ATF4, ATP6V1B2, AXL, B3GNT3, B3GNT4, BAALC, BACH2, BAD, BANF1, BAX, BCAP31, BCHE, BCL10, BCL11A, BCL11B, BCL2, BCL3, BCL6, BCL9, BCR, BLM, BLNK, BLVRA, BLZF1, BMI1, BMPR1A, BOP1, BPI, BRAF, BRD1, BRD2, BRWD3, BTG1, BTK, BUB1B, C13orf1, C14orf58, C19orf59, C6orf25, CABLES1, CALM3, CALML3, CASC5, CASP1, CASP10, CASP3, CBFA2T2, CBFA2T3, CBFB, CBL, CCL20, CCNA1, CCNA2, CCNC, CCND1, CCR2, CCT5, CD109, CD14, CD160, CD177, CD19, CD1A, CD22, CD300A, CD33, CD38, CD3G, CD40, CD44, CD5, CD52, CD55, CD59, CD6, CD7, CD79B, CD80, CD8A, CD8B, CD93, CD99, CDA, CDCA7L, CDK6, CDK8, CDKL3, CDKN1B, CDKN2A, CDKN2B, CEBPA, CENPJ, CENPM, CEP110, CERK, CES1, CETN2, CHIC2, CHST11, CIITA, CLC, CLCF1, CLK1, CLP1, CNR2, COL1A1, COL23A1, COMT, CPOX, CRABP1, CREB1, CREBBP, CRKL, CRTC1, CRYBA1, CSE1L, CSF1R, CSF2, CSF2RA, CSF2RB, CSF3, CSF3R, CSPG4, CTAGE1, CTF1, CTNNA1, CTR9, CUTL1, CX3CL1, CXCL10, CXCR3, CXXC6, CYBA, CYP3A4, DAPP1, DARC, DBP, DCP2, DDX10, DDX18, DDX24, DDX58, DEFA1, DEK, DGKD, DHX32, DIP2A, DIRC2, DLX4, DMTF1, DNAJA3, DNAJC3, DNAL4, DNMT1, DNTT, DOK1, DOK2, DPF2, DPP9, DSCR2, DSG3, EDG7, EED, EI24, EIF1AX, EIF3S6, EIF4G2, ELA2, ELL, ELL2, EMD, ENC1, ENG, ENTPD1, EP300, EPHA3, EPOR, EPS15, EPX, ERBB2, ERCC2, ERCC3, ERG, ERMAP, ERFF1, ESR2, ETS1, ETS2, ETV6, ETV7, EVI1, EVI2A, EWSR1, EXOSC9, EXT1, EZH2, F11R, F2R, F9, FAM129C, FANCI, FARSA, FARSB, FBXL13, FBXW7, FCER1A, FCGR2B, FCRLM1, FES, FGF6, FGFR1, FGFR1OP, FGFR1OP2, FGFR4, FHL5, FHOD1, FLI1, FLT3, FMOD, FN1, FNBP1, FOLR3, FOXK2, FOXN2, FOXO1A, FOXO3A, FRAT1, FRAT2, FSTL3, FUBP1, FUS, FUSIP1, FUT6, FVT1, FYB, GAB1, GAS7, GATA1, GATA2, GCA, GEMIN4, GFI1, GFI1B, GGH, GINS1, GIPC3, GMIP, GMPR2, GMPS, GOPC, GP1BB, GP5, GP9, GPHN, GPR23, GPR30, GPX1, GRAP2, GRWD1, GSN, GSPT1, GSTP1, GTF2F2, GTPBP1, H2AFY, H3F3A, HAMP, HBA1, HBB, HBG1, HBG2, HBQ1, HCK, HCLS1, HCRT, HDAC1, HDAC10, HDAC2, HDAC3, HDAC8, HEMGN, HEXB, HHEX, HIP1, HIPK1, HIPK2, HLA-A, HLA-B, HLA-DPB1, HLA-DRB1, HLF, HMGA1, HMHA1, HMHB1, HNRPC, HNRPD, HOXA10, HOXA7, HOXA9, HOXC13, HOXD11, HOXD3, HOXD4, HPR, HPS1, HR, HRAS, HRB, HSH2D, HSP90AA1, HSPH1, HTRA2, ID4, IDI1, IFIT3, IFNA1, IFNB1, IFNW1, IFT122, IGHG1, IGJ, IGC, IGLC1, IKBK, IKZF1, IKZF4, IKZF5, IL11, IL11RA, IL12RB2, IL15, IL15RA, IL21R, IL26, IL3, IL6ST, IL9R, ILDR1, INA, INHBA, INSR, IRAK3, IRF1, IRF8, ISG20, ITCH, ITGA2B, ITGA4, ITGB3, JAK2, JARID1A, JTB, JUNB, KCNJ5, KIAA0101, KIAA0196, KIF20A, KIF4A, KIT, KLF6, KLRG1, KRAS, KRT10, LAIR1, LASP1, LBX1, LCK, LECT2, LHX1, LHX2, LHX4, LIF, LIFR, LIG4, LMO1, LMO2, LPP, LRDD, LTB4R, LTF, LUC7L, LY6E, LY86, LYL1, LYPLA3, MAD1L1, MAFB, MAFG, MAX, MBD1, MCL1, MCM2, MCTS1, MDGA1, MDM2, MDS1, MECP2, MEIS1, MEIS2, MEN1, MET, METAP1, MGAT4A, MKL1, MLF1, MLF2, MLH1, MLL, MLLT1, MLLT10, MLLT11, MLLT3, MLLT4, MLLT6, MLLT7, MLXIP, MME, MMP11, MMP8, MN1, MOS, MPL, MPO, MS4A6A, MSH2, MSH3, MSI2, MT1A, MTAP, MTCP1, MVP, MXI1, MYADM, MYB, MYC, MYEOV, MYH11, MYO5A, MYST3, MYST4, MZF1, NADSYN1, NAGA, NBN, NCKIPSD, NCR1, NDOR1, NDUFA12L, NEK1, NEK2, NET1, NF1, NF2, NFKB1, NFKB2, NFKBIL1, NGFR, NHLH1, NKG7, NLRP1, NLRP12, NME1, NME3, NME4, NMI, NMNAT1, NNT, NOTCH1, NOTCH2, NOTCH3, NPBWR2, NPM1, NPW, NQO1, NR3C1, NR4A1, NR4A3, NRAS, NSD1, NT5E, NTRK1, NUCB2, NUDC, NUDCD1, NUDT4, NUMA1, NUMB, NUP214, NUP98, ORC5L, OSM, OSMR, P2RX1, P2RX4, P2RX5, P2RY1, P2RY10, P2RY11, P2RY14, P2RY2, P2RY4, P2RY5, P2RY8, PABPC1, PABPC3, PADI4, PARD6A, PASK, PBX1, PBX2, PCBP2, PDCD5, PDE1B, PDGFB, PDGFRA, PDGFRB, PDZK1IP1, PER1, PEX14, PFKFB3, PHACTR3, PHF15, PHF16, PIAS3, PICALM, PIGA, PIGS, PIGT, PIK3CA, PIK3CG, PILRA, PIM1, PITX2, PIWIL1, PLCB1, PLEK, PLSCR2, PLSCR3, PMAIP1, PMF1, PML, POU2AF1, PPAN, PPAP2A, PPARG, PPIL2, PPIL5, PPP1CA, PPP2R4, PPP4C, PRAM1, PRAME, PRDM16, PRDX1, PRDX2, PRDX3, PRF1, PRG2, PRICKLE1, PRRX1, PSCD1, PSCD2, PSIP1, PTAFR, PTEN, PTGER1, PTPN11, PTPN6, PTPN9, PTPRJ, PTPRO, PURA, PXDN, PYCARD, RAB3A, RABEP1, RAD50, RAD9B, RAF1, RANBP17, RAP1GDS1, RARA, RASGRP4, RASSF1, RASSF2, RB1, RB1CC1, RBBP9, RBM12, RBM15, RCBTB1, RD3, REC8L1, REL, RET, RGS2, RNASEH2A, RNF2, RNF26, ROD1, ROS1, RPA1, RPL22, RPL6, RPS6KB2, RSPO3, RUNX1, RUNX1T1, RUNX2, RXRA, S100A8, SAMSN1, SAP130, SBDS, SCARF1, SCRIB, SCYE1, SENP6, SEPP1, SERPINB9, SERPIND1, SET, SETDB2, SF1, SH2D1A, SH2D1B, SH3GL1, SHD, SIN3A, SLC19A1, SLC1A5, SLC20A1, SLC20A2, SLC25A32, SLC28A3, SLC2A1, SLC39A8, SLC41A1, SMAD2, SMAD3, SMARCA2, SNX5, SOCS1, SOCS2, SOCS3, SOCS6, SOD1, SOX4, SP100, SPBCC1, SPH1, SRC, SRCN, SRYX2, SSRP2, ST3GAL2, ST3GAL5, STAT1,
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DNA topoisomerase	SEPT9, AFF1, CREBBP, CYP3A4, EDD1, FANCI, GAS7, IDS, ILF2, PAPD5, TOP1, TOP1MT, TOP2A, TOP3A, TOP3B, TOPBP1, TRIM41, UBE1
Combined factor V and VIII deficiency	SERPINA5
Plasmin inhibitor deficiency	SERPINF2
ADULT syndrome	SHFM1, TP73L
EEC syndrome	SHFM1, TP73L
Solitary median maxillary central incisor	SHH
Glucose/galactose malabsorption	SLC10A2, SLC5A1
Allan-Herndon-Dudley syndrome	SLC16A2
Thiamine-responsive megaloblastic anemia syndrome	SLC19A2
Basal ganglia disease	SLC19A3, TOR1A
Carnitine-acylcarnitine translocase deficiency	SLC25A20
Loeys-Dietz syndrome	SLC2A10, TGFBR1, TGFBR2
Fanconi-Bickel syndrome	SLC2A2
Homozygous 2p16 deletion syndrome	SLC3A1
Hartnup disorder	SLC3A1, SLC6A19
Renal glucosuria	SLC5A2
Orthostatic intolerance	SLC6A2
Anxiety-related personality traits	SLC6A4
Lysinuric protein intolerance	SLC7A7
Schimke immunoosseous dysplasia	SMARCA1
PCWH	SOX10
Infundibular hypoplasia and hypopituitarism	SOX3
Troyer syndrome	SPG20
Mast syndrome	SPG21
Fibrocalculous pancreatic diabetes	SPINK1

Sepiapterin reductase deficiency	SPR
Pseudovaginal perineoscrotal hypospadias	SRD5A1, SRD5A2
McLeod syndrome	SRPX, XK
Placental steroid sulfatase deficiency	STS
Transaldolase deficiency	TALDO1
Small patella syndrome	TBX4
Atransferrinemia	TF
Char syndrome	TFAP2B
Camurati-Engelmann disease	TGFB1
Segawa syndrome	TH
Cartilage-hair hypoplasia	THY1
Jensen syndrome	TIMM8A
Wernicke-Korsakoff syndrome	TKTL1
Epidermodysplasia verruciformis	TMC6, TMC8
Hay-Wells syndrome	TP73L
Limb-mammary syndrome	TP73L
Rapp-Hodgkin syndrome	TP73L
Total iodide organification defect	TPO
Mulibrey nanism	TRIM37
Lymphangiomyomatosis	TSC1, TSC2
Sudden infant death with dysgenesis of the testes syndrome	TSPYL1
Nasu-Hakola disease	TYROBP
Crigler-Najjar syndrome	UGT1A1, UGT1A4
Hyperuricemic nephropathy	UMOD
Medullary cystic kidney disease	UMOD
Beta-ureidopropionase deficiency	UPB1
Wagner syndrome	VCAN
Cohen syndrome	VPS13B

ARC syndrome	VPS33B
Wolfram syndrome	WFS1
Rokitansky-Kuster-Hauser syndrome	WNT4
Frasier syndrome	WT1
De Sanctis-Cacchione syndrome	XPA
17 20-lyase deficiency	
2-methylbutyrylglycinuria	
3-beta-hydroxysteroid dehydrogenase type II deficiency	
3-M syndrome	
3-Methylcrotonyl-CoA carboxylase deficiency	
3-methylglutaconicaciduria	
6-mercaptopurine sensitivity	
Acampomelic campolelic dysplasia	
Acatalasemia	
Achalasia-addisonianism-alacrimia syndrome	
Achondrogenesis Ib	
Achondrogenesis-hypochondrogenesis type II	
Acid-labile subunit deficiency of	
Acrokeratosis verruciformis	
Acyl-CoA dehydrogenase deficiency of	
Adenoma periampullary	
Adiponectin deficiency	
Adrenal hyperplasia congenital	
Advanced sleep phase syndrome	
Agenesis of the corpus callosum with peripheral neuropathy	

AICA-ribosiduria due to ATIC deficiency	
Aldolase A deficiency	
Aldosterone to renin ratio raised	
Alpha-1-antichymotrypsin deficiency	
Alpha-actinin-3 deficiency	
Alpha-methylacetoacetic aciduria	
Alpha-methylacyl-CoA racemase deficiency	
Amish infantile epilepsy syndrome	
AMP deaminase deficiency	
Amyloid neuropathy	
Analgesia from kappa-opioid receptor agonist female-specific	
Aneurysm familial arterial	
Angiofibroma sporadic	
Anhaptoglobinemia	
Aniridia type II	
Ankylosing spoldylitis	
Anterior segment anomalies and cataract	
Apnea postanesthetic	
Apolipoprotein deficiency	
Apparent mineralocorticoid excess hypertension due to	
Aromatic L-amino acid decarboxylase deficiency	
Autonomic nervous system dysfunction	
Bart-Pumphrey syndrome	
B-cell non-Hodgkin lymphoma high-grade	

Beare-Stevenson cutis gyrata syndrome	
Beryllium disease chronic	
Beta-2-adrenoreceptor agonist reduced response to	
Bile acid malabsorption primary	
Blepharophimosis epicanthus inversus and ptosis	
Blue-cone monochromacy	
Bone mineral density variability	
Bothnia retinal dystrophy	
Butterfly dystrophy retinal	
Calcinosis tumoral	
Carbamoylphosphate synthetase I deficiency	
Carcinoid tumor of lung	
Carcinoid tumors intestinal	
Cardioencephalomyopathy fatal infantile due to cytochrome c oxidase deficiency	
Carpal tunnel syndrome familial	
Cavernous malformations of CNS and retina	
CD8 deficiency familial	
Cerebellar hypoplasia VLDLR-associated	
Cerebral arteriopathy with subcortical infarcts and leukoencephalopathy	
Cerebral dysgenesis neuropathy ichthyosis and palmoplantar keratoderma syndrome	

Cerebrovascular disease occlusive	
Ceroid-lipofuscinosis	
CETP deficiency	
Chloride diarrhea congenital Finnish type	
Chondrodysplasia Grebe type	
Chorea hereditary benign	
Choreoathetosis hypothyroidism and respiratory distress	
Chronic infections due to opsonin defect	
Chudley-Lowry syndrome	
Chylomicronemia syndrome familial	
Coats disease	
Codeine sensitivity	
Colchicine resistance	
Coloboma ocular	
Colonic aganglionosis total with small bowel involvement	
Combined hyperlipemia	
Combined SAP deficiency	
Complementary component deficiency	
Complex mitochondrial respiratory chain deficiency of	
Congenital bilateral absence of vas deferens	
Conjunctivitis ligneous	
Contractural arachnodactyly congenital	
COPD rate of decline of lung function in	
Coronary spasms	

Corpus callosum agenesis of with mental retardation ocular coloboma and micrognathia	
Coumarin resistance	
CPT deficiency hepatic	
Cramps potassium-aggravated	
Craniofacial anomalies empty sella turcica corneal endothelial changes and abnormal retinal and auditory bipolar cells	
Craniofacial-deafness-hand syndrome	
Craniofacial-skeletal- dermatologic dysplasia	
Craniofrontonasal dysplasia	
CRASH syndrome	
Creatine deficiency syndrome X-linked	
Cyclic ichthyosis with epidermolytic hyperkeratosis	
Cylindromatosis familial	
D-2-hydroxyglutaric aciduria	
Debrisoquine sensitivity	
Dejerine-Sottas disease	
Dengue fever protection against	
Dental anomalies isolated	
Dentatorubro-pallidoluysian atrophy	
Dentin dysplasia type II	
Dentinogenesis imperfecta Shields type	
Desmoid disease hereditary	
Dilated cardiomyopathy with woolly hair and keratoderma	
Dimethylglycine dehydrogenase deficiency	

Disordered steroidogenesis isolated	
Dissection of cervical arteries	
DNA ligase I deficiency	
Doyme honeycomb degeneration of retina	
Dyggve-Melchior-Clausen disease	
Dyssegmental dysplasia Silverman-Handmaker type	
Dystransthyretinemic hyperthyroxinemia	
Elite sprint athletic performance	
Endotoxin hyporesponsiveness	
Endplate acetylcholinesterase deficiency	
Eosinophil peroxidase deficiency	
Epithelial ovarian cancer somatic	
Erythremias	
Erythrokeratoderma	
Exertional myoglobinuria due to deficiency of LDH-A	
Ezetimibe nonresponse to	
Fatty liver acute of pregnancy	
Fertile eunuch syndrome	
Fibromatosisl	
Fitzgerald factor deficiency	
Fluorouracil toxicity sensitivity to	
Focal cortical dysplasia Taylor balloon cell type	
Follicle-stimulating hormone deficiency isolated	

Foveomacular dystrophy adult-onset with choroidal neovascularization	
Fructose-bisphosphatase deficiency	
Fucosyltransferase-6 deficiency	
GABA-transaminase deficiency	
Giant platelet disorder isolated	
Giant-cell fibroblastoma	
Glomerulocystic kidney disease hypoplastic	
Glucose transport defect blood-brain barrier	
Glucosidase I deficiency	
GM-gangliosidosis	
Gnathodiaphyseal dysplasia	
Greenberg dysplasia	
Gyrate atrophy of choroid and retina with ornithinemia B6 responsive or unresponsive	
Hand-foot-uterus syndrome	
Harderoporphyria	
HDL cholesterol level QTL	
Hearing loss low-frequency sensorineural	
Heinz body anemia	
Hemangioblastoma cerebellar	
Hematopoiesis cyclic	
Hematuria familial benign	
Hemiplegic migraine familial	
Hemosiderosis systemic due to aceruloplasminemia	
Hepatic failure early onset and neurologic disorder	
Hepatic lipase deficiency	
Hex A pseudodeficiency	

High-molecular-weight kininogen deficiency	
HMG-CoA deficiency	
Homocysteine plasma level	
Homocystinuria-megaloblastic anemia cbl E type	
HPRT-related gout	
Hyalinosis infantile systemic	
Hyperapobetalipoproteinemia	
Hyperinsulinism- hyperammonemia syndrome	
Hyperkeratotic cutaneous capillary-venous malformations associated with cerebral capillary malformations	
Hyperornithinemia- hyperammonemia- homocitrullinemia syndrome	
Hyperostosis endosteal	
Hyperproreninemia	
Hyperprothrombinemia	
Hyperthroidism	
Hypertrypsinemia	
Hypoceruloplasminemia	
Hypoglobulinemia and absent B cells	
Hypogonadism hypergonadotropic	
Hypohaptoglobinemia	
Hypolactasia adult type	
Hypoparathyroidism- retardation-dysmorphism syndrome	
Hypoplastic enamel pitting localized	
Hystrix-like ichthyosis with deafness	
IgE levels QTL	

IgG receptor I phagocytic familial deficiency of	
IgG2 deficiency	
Immunodeficiency-centromeric instability-facial anomalies syndrome	
Immunodysregulation polyendocrinopathy and enteropathy X-linked	
Immunoglobulin A deficiency	
Inosine triphosphatase deficiency	
Interleukin-2 receptor alpha chain deficiency of	
Iris hypoplasia and glaucoma	
Iron overload/deficiency	
Juvenile polyposis/hereditary hemorrhagic telangiectasia syndrome	
Kallikrein decreased urinary activity of	
Kappa light chain deficiency	
Kenny-Caffey syndrome-1	
Keratitis-ichthyosis-deafness syndrome	
Keratoderma palmoplantar with deafness	
Keratosis palmoplantaria striata	
Lactate dehydrogenase-B deficiency	
Lacticacidemia due to PDX1 deficiency	
Langer mesomelic dysplasia	
Laron dwarfism	
Larson syndrome	
Laryngoonychocutaneous syndrome	
Leanness inherited	

Legionaire disease	
Leprechaunism	
Leri-Weill dyschondrosteosis	
Lhermitte-Duclos syndrome	
Li Fraumeni syndrome	
Lower motor neuron disease progressive without sensory symptoms	
LPA deficiency congenital	
Lynch cancer family syndrome II	
Maculopathy bull's-eye	
Mandibuloacral dysplasia with type B lipodystrophy	
MASP2 deficiency	
MASS syndrome	
Mastocytosis with associated hematologic disorder	
Megakaryoblastic leukemia acute	
Meleda disease	
Melorheostosis with osteopoikilosis	
Mephenytoin poor metabolizer	
Methionine adenosyltransferase deficiency autosomal recessive	
Methylcobalamin deficiency cblG type	
Mevalonicaciduria	
Microcoria-congenital nephrosis syndrome	
Mitochondrial complex deficiency	
Mitochondrial DNA depletion myopathy	
Mucoepidermoid salivary gland carcinoma	
Multiple malignancy syndrome	

Myelofibrosis idiopathic	
Myelokathexis isolated	
Myelomonocytic leukemia chronic	
Myeloperoxidase deficiency	
Myoglobinuria/hemolysis due to PGK deficiency	
Myokymia with neonatal epilepsy	
Myxoma intracardiac	
N-acetylglutamate synthase deficiency	
Neonatal ichthyosis-sclerosing cholangitis syndrome	
Nephropathy-hypertension	
Neural tube defects maternal risk of	
Neurofibromatosis-Noonan syndrome	
Nevus epidermal epidermolytic hyperkeratotic type	
Newfoundland rod-cone dystrophy	
Norwalk virus infection resistance to	
Nucleoside phosphorylase deficiency immunodeficiency due to	
Oculopharyngeal muscular dystrophy	
Oligodontia-colorectal cancer syndrome	
Opitz G syndrome	
Opremazole poor metabolizer	
Optic nerve coloboma with renal disease	
Orolaryngeal cancer	

Oroticaciduria	
OSMED syndrome	
Ossification of the posterior longitudinal spinal ligaments	
Ovarian sex cord tumors	
Pallidopontonigral degeneration	
Partington syndrome	
Periodic fever familial	
Persistent hyperinsulinemic hypoglycemia of infancy	
Phenylthiocarbamide tasting	
Phosphoribosyl pyrophosphate synthetase-related gout	
Phosphorylase kinase deficiency of liver and muscle autosomal recessive	
Pigmentation of hair skin and eyes variation in	
Pigmented adrenocortical disease primary isolated	
Pituitary ACTH-secreting adenoma	
Pituitary anomalies with holoprosencephaly-like features	
Pituitary tumor invasive	
Platelet defect/deficiency	
Pneumonitis desquamative interstitial	
Pneumothorax primary spontaneous	
PPM-X syndrome	
Precocious puberty male	
Premature chromosome condensation with microcephaly and mental retardation	

Prion disease with protracted course	
Progressive external ophthalmoplegia with mitochondrial DNA deletions	
Proguanil poor metabolizer	
Prolactinoma hyperparathyroidism carcinoid syndrome	
Propionicacidemia	
Proud syndrome	
Pseudohermaphroditism male	
Pseudovitamin D deficiency rickets 1	
Psoraisis	
Pulmonary hypertension familial primary	
Pyloric stenosis infantile hypertrophic	
Pyogenic sterile arthritis pyoderma gangrenosum and acne	
Radioulnar synostosis with amegakaryocytic thrombocytopenia	
Rapid progression to AIDS from HIV1 infection	
Red hair/fair skin	
Renal hypoplasia isolated	
Response to morphine-6- glucuronide	
Restrictive dermopathy lethal	
Retinal cone dsytrophy	
Retinol binding protein deficiency of	
Rh-mod syndrome	
Rh-negative blood type	

Ribose 5-phosphate isomerase deficiency	
Ring dermoid of cornea	
Robinow syndrome autosomal recessive	
Roussy-Levy syndrome	
Rubenstein-Taybi syndrome	
Sandhoff disease infantile juvenile and adult forms	
Sarcoma synovial	
SARS progression of	
Schwartz-Jampel syndrome type 1	
Sea-blue histiocyte disease	
Self-healing collodion baby	
SEMD Pakistani type	
Sensory ataxic neuropathy dysarthria and ophthalmoparesis	
Sertoli-cell-only syndrome	
Skin fragility-woolly hair syndrome	
Slowed nerve conduction velocity AD	
SMED Strudwick type	
Smith-Fineman-Myers syndrome	
Somatotrophinoma	
Spastic ataxia/paraplegia	
Specific language impairment QTL	
Spinocerebellar ataxia	
Spondylocarpotarsal synostosis syndrome	
Stapes ankylosis syndrome without symphalangism	
STAT1 deficiency	

Stem-cell leukemia/lymphoma syndrome	
Stevens-Johnson syndrome carbamazepine-induced	
Stuve-Wiedemann syndrome/Schwartz-Jampel type 2 syndrome	
Sucrose intolerance	
Superoxide dismutase elevated extracellular	
Sutherland-Haan syndrome-like	
Sweat chloride elevation without CF	
Symphalangism proximal	
Tauopathy and respiratory failure	
T-cell immunodeficiency congenital alopecia and nail dystrophy	
Temperature-sensitive apoptosis cellular	
Tetra-amelia autosomal recessive	
Thanatophoric dysplasia types I and II	
Thyrotropin-releasing hormone deficiency	
Thyroxine-binding globulin deficiency	
Tietz syndrome	
Toenail dystrophy isolated	
Tolbutamide poor metabolizer	
Transient bullous of the newborn	
Transposition of great arteries dextro-looped	

Treacher Collins mandibulofacial dysostosis	
Tremor familial essential	
Trichodontoosseous syndrome	
Trismus-pseudocomptodactyly syndrome	
Twinning dizygotic	
Unna-Thost disease nonepidermolytic	
Urolithiasis	
VATER association with hydrocephalus	
Ventricular fibrillation idiopathic	
Vitamin K-dependent coagulation defect	
Warfarin resistance/sensitivity	
Watson syndrome	
Weissenbacher-Zweymüller syndrome	
Xanthinuria type I	
X-inactivation familial skewed	
XLA and isolated growth hormone deficiency	
Yemenite deaf-blind hypopigmentation syndrome	

Additional File 8 - Functional modules and their statistically significant associated disease terms ($p\text{-value} < 5.0 \times 10^{-4}$). Each of the genes was linked with the corresponding disease term in the OMIM database with the search algorithm written for this study. This resulted in a matrix composed of genes and disease terms. Since, a functional module versus genes matrix was already created, with a simple matrix multiplication, each functional module is associated with its corresponding disease terms. To determine the significance of our analysis, the gene - disease term relations were randomized 10^4 times while keeping the total number associations of one gene to diseases constant. For each randomization step, the functional module versus disease term matrix is calculated, if the probability of finding functional module-disease term is smaller than 5.0×10^{-4} , this association was accepted as significant. 227 out of 566 functional modules have significant associations with disease terms. The two functional modules indicating relation among five disease terms are four member modules; four disease terms are associated with five functional modules; 17, 61 and 142 functional modules link three, two and one disease term, respectively. The 227 functional modules indicating associations with disease terms were encountered and investigated. To observe the effect of extending our network, the proteins were separated according to the source as “core” or “extended (extnd)”. Addition to this, the number of hub proteins in each functional module was also determined, which is an indication of the diversity of disorders. For each functional module, the number of members that are associated with the disease term was indicated with “fraction” term. The proteins added to the network by extension are indicated with “*”.

module #	functional module members	core	extnd	hub	disease	disease class	p-value	fraction
501	INSR, INS, SLC2A4, LEP	4	0	3	Diabetes mellitus	Nutritional and Metabolic	1.00x10 ⁻¹⁰	4 / 4
					Growth retardation	Congenital	4.00x10 ⁻⁰⁴	3 / 4
					Hypertriglyceridemia	Nutritional and Metabolic	1.00x10 ⁻¹⁰	3 / 4
					Hypoglycemia	Nutritional and Metabolic	1.00x10 ⁻¹⁰	3 / 4
					Insulin resistance	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	4 / 4
565	PROC*, F2, PROS1, F5	3	1	0	Angioedema	Cardiovascular	4.00x10 ⁻⁰⁴	2 / 4
					Epidermolysis bullosa	Congenital	5.00x10 ⁻⁰⁴	2 / 4
					Protein S deficiency	Hemic and Lymphatic	2.00x10 ⁻⁰⁴	2 / 4
					Thrombophilia	Hemic and Lymphatic	1.00x10 ⁻⁰⁴	3 / 4
					Venous thrombosis	Cardiovascular	1.00x10 ⁻⁰⁴	3 / 4
22	TNF, IL6, IL1A, TLR2, TLR4, CSF2, IL10*	6	1	3	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 7
					Fibrosis	Pathological Condition	5.00x10 ⁻⁰⁴	5 / 7
					Leprosy	Bacterial Infections	1.00x10 ⁻¹⁰	3 / 7
					Sepsis	Bacterial Infections	3.00x10 ⁻⁰⁴	4 / 7
88	TNF, IL6, TLR1, TLR2, TLR4, IL4*	5	1	2	Leprosy	Bacterial Infections	1.00x10 ⁻⁰⁴	3 / 6
					Malaria	Parasitic	3.00x10 ⁻⁰⁴	3 / 6
					Meningococcal disease	Bacterial Infections	2.00x10 ⁻⁰⁴	2 / 6
					Sepsis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 6
205	IRS2*, INSR, LEP, IRS1, INS	4	1	4	Diabetes mellitus	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	4 / 5
					Hypertriglyceridemia	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	3 / 5
					Insulin resistance	Nutritional and Metabolic	1.00x10 ⁻¹⁰	5 / 5
					Obesity	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	5 / 5
206	APOB, APOE, LPL, INS, LDLR	5	0	1	Atherosclerosis	Cardiovascular	1.00x10 ⁻⁰⁴	5 / 5
					Hypercholesterolemia	Nutritional and Metabolic	1.00x10 ⁻¹⁰	3 / 5
					Hyperlipoproteinemia	Nutritional and Metabolic	1.00x10 ⁻¹⁰	3 / 5
					Hypertriglyceridemia	Nutritional and Metabolic	3.00x10 ⁻⁰⁴	3 / 5
295	INSR, INS, IRS1, LEP, PTPN1*	4	1	4	Diabetes mellitus	Nutritional and Metabolic	4.00x10 ⁻⁰⁴	4 / 5
					Hypertriglyceridemia	Nutritional and Metabolic	1.00x10 ⁻¹⁰	3 / 5
					Insulin resistance	Nutritional and Metabolic	1.00x10 ⁻¹⁰	5 / 5
					Obesity	Nutritional and Metabolic	1.00x10 ⁻¹⁰	5 / 5

module #	functional module members	core	extnd	hub	disease	disease class	p-value	fraction
15	TNF, IL6, IL1A, TLR2, TLR4, CSF2, IFNG*	6	1	3	Fibrosis	Pathological Condition	4.00x10 ⁻⁰⁴	5 / 7
					Meningococcal disease	Bacterial Infections	5.00x10 ⁻⁰⁴	2 / 7
					Sepsis	Bacterial Infections	3.00x10 ⁻⁰⁴	4 / 7
21	TNF, IL6, IL1A, TLR2, NOS2A, CSF2, IL10*	6	1	4	Fibrosis	Pathological Condition	1.00x10 ⁻¹⁰	6 / 7
					Leprosy	Bacterial Infections	1.00x10 ⁻¹⁰	3 / 7
					Tuberculosis	Bacterial Infections	1.00x10 ⁻⁰⁴	4 / 7
45	TNF, IL6, IL1A, TLR2, TLR4, CSF2, IL8*	6	1	3	Cystic fibrosis	Respiratory	2.00x10 ⁻⁰⁴	3 / 7
					Fibrosis	Pathological Condition	5.00x10 ⁻⁰⁴	5 / 7
					Sepsis	Bacterial Infections	2.00x10 ⁻⁰⁴	4 / 7
77	TNF, VCAM1, NOS2A, IL1A, TNFRSF1A, IFNG*	5	1	3	Listeria monocytogenes	Bacterial Infections	1.00x10 ⁻⁰⁴	3 / 6
					Stroke	Cardiovascular	2.00x10 ⁻⁰⁴	4 / 6
					Tuberculosis	Bacterial Infections	1.00x10 ⁻⁰⁴	4 / 6
79	TNF, IL6, IL1A, TNFRSF1A, NOS2A, IFNG*	5	1	4	Listeria monocytogenes	Bacterial Infections	2.00x10 ⁻⁰⁴	3 / 6
					Rheumatoid arthritis	Musculoskeletal	4.00x10 ⁻⁰⁴	4 / 6
					Tuberculosis	Bacterial Infections	1.00x10 ⁻⁰⁴	4 / 6
81	TNF, IL6, TLR1, TLR2, TLR4, IFNG*	5	1	2	Leprosy	Bacterial Infections	2.00x10 ⁻⁰⁴	3 / 6
					Meningococcal disease	Bacterial Infections	1.00x10 ⁻¹⁰	2 / 6
					Sepsis	Bacterial Infections	1.00x10 ⁻⁰⁴	4 / 6
129	TNF, IL6, IL1A, VEGFA, TGFB1, FOS*	5	1	5	Alzheimer's disease	Nervous System	5.00x10 ⁻⁰⁴	4 / 6
					DiGeorge syndrome	Congenital	5.00x10 ⁻⁰⁴	2 / 6
					Rheumatoid arthritis	Musculoskeletal	1.00x10 ⁻¹⁰	5 / 6
132	TNF, IL6, TLR1, TLR2, TLR4, TLR9*	5	1	2	Leprosy	Bacterial Infections	3.00x10 ⁻⁰⁴	3 / 6
					Meningococcal disease	Bacterial Infections	3.00x10 ⁻⁰⁴	2 / 6
					Sepsis	Bacterial Infections	1.00x10 ⁻⁰⁴	4 / 6
147	TNF, IL6, TLR1, TLR2, TLR4, MYD88*	5	1	2	Leprosy	Bacterial Infections	1.00x10 ⁻⁰⁴	3 / 6
					Meningococcal disease	Bacterial Infections	4.00x10 ⁻⁰⁴	2 / 6
					Sepsis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 6
150	TNF, IL6, IL1A, IL10*, TGFB1, NOS2A	5	1	5	Crohn disease	Digestive System	4.00x10 ⁻⁰⁴	3 / 6
					Diabetes mellitus	Nutritional and Metabolic	5.00x10 ⁻⁰⁴	4 / 6
					Fibrosis	Pathological Condition	2.00x10 ⁻⁰⁴	5 / 6

module #	functional module members	core	extnd	hub	disease	disease class	p-value	fraction
161	TNF, IL6, TLR1, TLR2, TLR4, TLR7*	5	1	2	Leprosy	Bacterial Infections	1.00x10 ⁻⁰⁴	3 / 6
					Meningococcal disease	Bacterial Infections	2.00x10 ⁻⁰⁴	2 / 6
					Sepsis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 6
225	TNF, IL6, IL1A, IL10*, STAT3	4	1	4	Crohn disease	Digestive System	1.00x10 ⁻¹⁰	4 / 5
					Diabetes mellitus	Nutritional and Metabolic	3.00x10 ⁻⁰⁴	4 / 5
					Rheumatoid arthritis	Musculoskeletal	4.00x10 ⁻⁰⁴	4 / 5
264	TNF, IL6, IL1A, IL1RN*, LEP	4	1	4	Diabetes mellitus	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	4 / 5
					Osteoporosis	Musculoskeletal	1.00x10 ⁻⁰⁴	4 / 5
					Rheumatoid arthritis	Musculoskeletal	3.00x10 ⁻⁰⁴	4 / 5
289	INSR, INS, IRS1, LEP, SOCS3*	4	1	4	Diabetes mellitus	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	4 / 5
					Hypertriglyceridemia	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	3 / 5
					Hypoglycemia	Nutritional and Metabolic	5.00x10 ⁻⁰⁴	3 / 5
433	IGF2, VEGFA, PTGS2, TP53*	3	1	2	Adenocarcinoma	Neoplasms	3.00x10 ⁻⁰⁴	3 / 4
					Cervical carcinoma	Neoplasms	2.00x10 ⁻⁰⁴	2 / 4
					Polyposis	Neoplasms	1.00x10 ⁻¹⁰	3 / 4
502	PPARA, INS, UCP3*, LEP	3	1	2	Hypoglycemia	Nutritional and Metabolic	3.00x10 ⁻⁰⁴	3 / 4
					Insulin resistance	Nutritional and Metabolic	1.00x10 ⁻¹⁰	4 / 4
					Obesity	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	4 / 4
561	F10, F9, F2, F8*	3	1	0	Arthropathy	Musculoskeletal	5.00x10 ⁻⁰⁴	2 / 4
					Bleeding disorder	Hemic and Lymphatic	1.00x10 ⁻¹⁰	3 / 4
					Hemorrhagic diathesis	Hemic and Lymphatic	5.00x10 ⁻⁰⁴	2 / 4
11	TNF, IL6, IL1A, TLR2, NOS2A, PTGS2, IFNG*	6	1	5	Fibrosis	Pathological Condition	1.00x10 ⁻¹⁰	6 / 7
					Tuberculosis	Bacterial Infections	1.00x10 ⁻⁰⁴	4 / 7
12	TNF, IL6, IL1A, TLR2, TLR4, PTGS2, IFNG*	6	1	4	Fibrosis	Pathological Condition	4.00x10 ⁻⁰⁴	5 / 7
					Sepsis	Bacterial Infections	2.00x10 ⁻⁰⁴	4 / 7
13	TNF, IL6, IL1A, TLR2, NOS2A, CSF2, IFNG*	6	1	4	Fibrosis	Pathological Condition	1.00x10 ⁻¹⁰	6 / 7
					Tuberculosis	Bacterial Infections	1.00x10 ⁻⁰⁴	4 / 7
34	TNF, IL6, IL1A, TLR2, TLR4, CSF2, CD14*	6	1	3	Meningococcal disease	Bacterial Infections	5.00x10 ⁻⁰⁴	2 / 7
					Sepsis	Bacterial Infections	1.00x10 ⁻⁰⁴	5 / 7
44	TNF, IL6, IL1A, TLR2, NOS2A, CSF2	6	1	4	Cystic fibrosis	Respiratory	2.00x10 ⁻⁰⁴	3 / 7

module #	functional module members	core	extnd	hub	disease	disease class	p-value	fraction
					Fibrosis	Pathological Condition	1.00x10 ⁻¹⁰	6 / 7
71	TNF, IL6, TP53*, VEGFA, STAT3, MMP2	5	1	4	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 6
					Osteoporosis	Musculoskeletal	1.00x10 ⁻⁰⁴	4 / 6
74	TNF, IL6, IL1A, VEGFA, TGFB1, SERPINE1	6	0	5	Diabetes mellitus	Nutritional and Metabolic	4.00x10 ⁻⁰⁴	4 / 6
					DiGeorge syndrome	Congenital	5.00x10 ⁻⁰⁴	2 / 6
80	TNF, IL6, IL1A, TNFRSF1A, TLR4, IFNG*	5	1	3	Meningococcal disease	Bacterial Infections	2.00x10 ⁻⁰⁴	2 / 6
					Rheumatoid arthritis	Musculoskeletal	2.00x10 ⁻⁰⁴	4 / 6
82	TNF, VCAM1, NOS2A, IL1A, TNFRSF1A, IL4*	5	1	3	Malaria	Parasitic	2.00x10 ⁻⁰⁴	3 / 6
					Stroke	Cardiovascular	1.00x10 ⁻¹⁰	5 / 6
86	TNF, IL6, IL1A, TNFRSF1A, NOS2A, IL4*	5	1	4	Malaria	Parasitic	4.00x10 ⁻⁰⁴	3 / 6
					Stroke	Cardiovascular	1.00x10 ⁻¹⁰	4 / 6
87	TNF, IL6, IL1A, TNFRSF1A, TLR4, IL4*	5	1	3	Malaria	Parasitic	2.00x10 ⁻⁰⁴	3 / 6
					Meningococcal disease	Bacterial Infections	5.00x10 ⁻⁰⁴	2 / 6
92	TNF, IL6, IL1A, TLR2, TLR4, IL1R1*	5	1	3	Meningococcal disease	Bacterial Infections	5.00x10 ⁻⁰⁴	2 / 6
					Sepsis	Bacterial Infections	1.00x10 ⁻⁰⁴	4 / 6
95	TNF, VCAM1, NOS2A, IL1A, TNFRSF1A, IL10*	5	1	3	Stroke	Cardiovascular	3.00x10 ⁻⁰⁴	4 / 6
					Tuberculosis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 6
97	TNF, IL6, IL1A, TIMP1, TGFB1, IL10*	5	1	4	Crohn disease	Digestive System	2.00x10 ⁻⁰⁴	3 / 6
					Diabetes mellitus	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	4 / 6
99	TNF, IL6, IL1A, TNFRSF1A, NOS2A, IL10*	5	1	4	Crohn disease	Digestive System	4.00x10 ⁻⁰⁴	3 / 6
					Tuberculosis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 6
100	TNF, IL6, IL1A, TNFRSF1A, TLR4, IL10*	5	1	3	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 6
					Meningococcal disease	Bacterial Infections	3.00x10 ⁻⁰⁴	2 / 6
106	TNF, IL6, IL1A, IL10*, TGFB1, ICAM1	5	1	4	Crohn disease	Digestive System	2.00x10 ⁻⁰⁴	3 / 6
					Diabetes mellitus	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	4 / 6
117	AGT, IL6, VEGFA, STAT3, INS, EGFR*	5	1	5	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 6
					MODY	Nutritional and Metabolic	5.00x10 ⁻⁰⁴	3 / 6
137	TNF, IL6, IL1A, JUN*, STAT3, LEP	5	1	5	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 6
					Diabetes mellitus	Nutritional and Metabolic	3.00x10 ⁻⁰⁴	4 / 6
139	TNF, IL6, IL1A, SOCS3*, STAT3, LEP	5	1	5	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 6

module #	functional module members	core	extnd	hub	disease	disease class	p-value	fraction
					Diabetes mellitus	Nutritional and Metabolic	5.00x10 ⁻⁰⁴	4 / 6
142	TNF, IL6, IL1A, TLR2, TLR4, TRAF6*	5	1	3	Meningococcal disease	Bacterial Infections	4.00x10 ⁻⁰⁴	2 / 6
					Sepsis	Bacterial Infections	1.00x10 ⁻⁰⁴	4 / 6
155	TNF, IL6, IL1A, MYD88*, TLR2, TLR4	5	1	3	Meningococcal disease	Bacterial Infections	5.00x10 ⁻⁰⁴	2 / 6
					Sepsis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 6
177	TNF, IL6, TP53*, VEGFA, PTGS2	4	1	4	Cervical carcinoma	Neoplasms	4.00x10 ⁻⁰⁴	2 / 5
					Rheumatoid arthritis	Musculoskeletal	5.00x10 ⁻⁰⁴	4 / 5
212	TNF, IL15, TLR2, NOS2A, IL10*	4	1	2	Leprosy	Bacterial Infections	1.00x10 ⁻¹⁰	3 / 5
					Tuberculosis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 5
214	PPARA, INS, ADIPOQ, LEP, UCP1*	4	1	2	Insulin resistance	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	4 / 5
					Obesity	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	5 / 5
221	TNF, IL6, IL1A, IFNG*, STAT3	4	1	4	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 5
					Rheumatoid arthritis	Musculoskeletal	1.00x10 ⁻¹⁰	4 / 5
240	AGT, IL6, VEGFA, PTGS2, TP53*	4	1	4	Adenocarcinoma	Neoplasms	4.00x10 ⁻⁰⁴	3 / 5
					Cervical carcinoma	Neoplasms	2.00x10 ⁻⁰⁴	2 / 5
243	AGT, IL6, VEGFA, TGFB1, EGFR*	4	1	4	DiGeorge syndrome	Congenital	2.00x10 ⁻⁰⁴	2 / 5
					Glomerulosclerosis	Urogenital	1.00x10 ⁻⁰⁴	3 / 5
247	TNF, IL6, IL1A, TLR4, IL18*	4	1	3	Crohn disease	Digestive System	1.00x10 ⁻⁰⁴	3 / 5
					Meningococcal disease	Bacterial Infections	3.00x10 ⁻⁰⁴	2 / 5
255	IRS2*, INSR, LEP, IRS1, IGF1	4	1	3	Diabetes mellitus	Nutritional and Metabolic	1.00x10 ⁻¹⁰	4 / 5
					Insulin resistance	Nutritional and Metabolic	1.00x10 ⁻¹⁰	5 / 5
257	TNF, IL6, IL1A, VEGFA, CXCL10*	4	1	4	Myasthenia	Nervous System	5.00x10 ⁻⁰⁴	2 / 5
					Rheumatoid arthritis	Musculoskeletal	4.00x10 ⁻⁰⁴	4 / 5
261	TNF, LDLR, INS, APOE, LPL	5	0	2	Hyperlipoproteinemia	Nutritional and Metabolic	1.00x10 ⁻¹⁰	3 / 5
					Hypertriglyceridemia	Nutritional and Metabolic	1.00x10 ⁻¹⁰	3 / 5
262	TNF, ADIPOQ, INS, LEP, LPL	5	0	3	Diabetes mellitus	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	4 / 5
					Hypertriglyceridemia	Nutritional and Metabolic	1.00x10 ⁻¹⁰	3 / 5
269	TNF, SP1*, TGFB1, MMP2, VEGFA	4	1	3	DiGeorge syndrome	Congenital	1.00x10 ⁻⁰⁴	2 / 5
					Proteinuria	Urogenital	5.00x10 ⁻⁰⁴	3 / 5
278	TNF, ADIPOQ, INS, LEP, SLC2A4	5	0	3	Diabetes mellitus	Nutritional and Metabolic	1.00x10 ⁻¹⁰	5 / 5

module #	functional module members	core	extnd	hub	disease	disease class	p-value	fraction
288	TNF, IRS1, INS, LEP, SOCS3*	4	1	4	Insulin resistance	Nutritional and Metabolic	1.00x10 ⁻¹⁰	5 / 5
					Diabetes mellitus	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	4 / 5
					Insulin resistance	Nutritional and Metabolic	5.00x10 ⁻⁰⁴	4 / 5
292	TNF, IL6, IFNB1*, TLR2, TLR4	4	1	2	Meningococcal disease	Bacterial Infections	1.00x10 ⁻⁰⁴	2 / 5
					Sepsis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 5
293	TNF, IL6, RNF36*, TLR2, TLR4	4	1	2	Meningococcal disease	Bacterial Infections	1.00x10 ⁻⁰⁴	2 / 5
					Sepsis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 5
299	TNF, IRAK1*, TLR2, TLR4, TLR1	4	1	1	Leprosy	Bacterial Infections	1.00x10 ⁻¹⁰	3 / 5
					Meningococcal disease	Bacterial Infections	2.00x10 ⁻⁰⁴	2 / 5
348	TNF, IL6, TNFRSF11B, IL4*	3	1	2	Osteoporosis	Musculoskeletal	1.00x10 ⁻¹⁰	4 / 4
					Paget disease	Neoplasms	5.00x10 ⁻⁰⁴	2 / 4
371	CETP, APOE, LPL, INS	4	0	1	Atherosclerosis	Cardiovascular	4.00x10 ⁻⁰⁴	4 / 4
					Hypertriglyceridemia	Nutritional and Metabolic	1.00x10 ⁻¹⁰	3 / 4
372	APOB, APOE, LPA, LDLR	4	0	0	Hypercholesterolemia	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	3 / 4
					Hyperlipoproteinemia	Nutritional and Metabolic	1.00x10 ⁻¹⁰	3 / 4
385	GP1BA, F2, F9, VWF*	3	1	0	Bleeding disorder	Hemic and Lymphatic	1.00x10 ⁻⁰⁴	3 / 4
					von Willebrand disease	Hemic and Lymphatic	5.00x10 ⁻⁰⁴	2 / 4
400	TNF, STAT6*, PTGS2, IL1A	3	1	3	Fibrosis	Pathological Condition	4.00x10 ⁻⁰⁴	4 / 4
					Myasthenia	Nervous System	5.00x10 ⁻⁰⁴	2 / 4
442	AGTR1, STAT3, AGT, EGFR*	3	1	2	Fibrosis	Pathological Condition	2.00x10 ⁻⁰⁴	4 / 4
					Renal tubular dysgenesis	Urogenital	4.00x10 ⁻⁰⁴	2 / 4
447	TNF, IL6, TNFRSF11B, IL18*	3	1	2	Crohn disease	Digestive System	1.00x10 ⁻⁰⁴	3 / 4
					Osteoporosis	Musculoskeletal	1.00x10 ⁻⁰⁴	3 / 4
460	ACE, AGT, AGTR1, NOS3	4	0	1	Hypertension	Cardiovascular	3.00x10 ⁻⁰⁴	4 / 4
					Renal tubular dysgenesis	Urogenital	1.00x10 ⁻¹⁰	3 / 4
462	PROC*, F2, THBD, SERPINA5	3	1	0	Thrombophilia	Hemic and Lymphatic	1.00x10 ⁻¹⁰	3 / 4
					Venous thrombosis	Cardiovascular	1.00x10 ⁻¹⁰	3 / 4
463	PROC*, F2, PROS1, SERPINA5	3	1	0	Protein S deficiency	Hemic and Lymphatic	3.00x10 ⁻⁰⁴	2 / 4
					Venous thrombosis	Cardiovascular	1.00x10 ⁻¹⁰	3 / 4
472	IGF1R*, IGF1, ESR1, IRS1	3	1	2	Insulin resistance	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	4 / 4

module #	functional module members	core	extnd	hub	disease	disease class	p-value	fraction
					Macular degeneration	Eye	2.00x10 ⁻⁰⁴	3 / 4
492	AGTR1, STAT3, AGT, FOS*	3	1	2	Fibrosis	Pathological Condition	2.00x10 ⁻⁰⁴	4 / 4
					Renal tubular dysgenesis	Urogenital	4.00x10 ⁻⁰⁴	2 / 4
499	TNF, IRS1, IGF1, LEP	4	0	3	Diabetes mellitus	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	4 / 4
					Insulin resistance	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	4 / 4
504	GHR*, IGF1, IRS1, GH1	3	1	1	Growth retardation	Congenital	5.00x10 ⁻⁰⁴	3 / 4
					Short stature	Musculoskeletal	1.00x10 ⁻¹⁰	3 / 4
541	INSR, INS, IRS1, SHC1*	3	1	3	Diabetes mellitus	Nutritional and Metabolic	1.00x10 ⁻¹⁰	4 / 4
					Insulin resistance	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	4 / 4
542	INSR, IGF1, IRS1, SHC1*	3	1	2	Diabetes mellitus	Nutritional and Metabolic	1.00x10 ⁻¹⁰	4 / 4
					Insulin resistance	Nutritional and Metabolic	1.00x10 ⁻¹⁰	4 / 4
544	LRP8, VLDLR, APOE, RELN*	3	1	0	Dementia	Nervous System	1.00x10 ⁻⁰⁴	3 / 4
					Supranuclear palsy	Nervous System	2.00x10 ⁻⁰⁴	2 / 4
549	TNF, IRAK3*, TLR2, TLR4	3	1	1	Meningococcal disease	Bacterial Infections	2.00x10 ⁻⁰⁴	2 / 4
					Sepsis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 4
550	TNF, HMGB1*, TLR2, TLR4	3	1	1	Meningococcal disease	Bacterial Infections	1.00x10 ⁻⁰⁴	2 / 4
					Sepsis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 4
560	GP1BA, F2, F9, F8*	3	1	0	Bleeding disorder	Hemic and Lymphatic	1.00x10 ⁻⁰⁴	3 / 4
					Hemorrhagic diathesis	Hemic and Lymphatic	4.00x10 ⁻⁰⁴	2 / 4
563	TNF, IRS1, INS, MAPK8*	3	1	3	Insulin resistance	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	4 / 4
					Obesity	Nutritional and Metabolic	4.00x10 ⁻⁰⁴	4 / 4
4	TNF, IL6, IL1A, VEGFA, CCL2*, ICAM1, MMP9	6	1	4	Rheumatoid arthritis	Musculoskeletal	1.00x10 ⁻¹⁰	5 / 7
5	TNF, IL6, IL1A, VEGFA, MAPK8*, ICAM1, MMP9	6	1	4	Multiple sclerosis	Nervous System	5.00x10 ⁻⁰⁴	3 / 7
19	TNF, IL6, IL1A, TLR2, TLR4, CSF2, IL4*	6	1	3	Sepsis	Bacterial Infections	3.00x10 ⁻⁰⁴	4 / 7
25	TNF, IL6, IL1A, TLR2, TLR4, PTGS2, CD40	6	1	4	Sepsis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 7
27	TNF, IL6, IL1A, TLR2, TLR4, CSF2, CD40	6	1	3	Sepsis	Bacterial Infections	2.00x10 ⁻⁰⁴	4 / 7
29	TNF, IL6, IL1A, VEGFA, CCL2*, ICAM1, CSF2	6	1	4	Rheumatoid arthritis	Musculoskeletal	3.00x10 ⁻⁰⁴	5 / 7
37	TNF, IL6, IL1A, VEGFA, CSF1, CSF2, FOS*	6	1	4	Rheumatoid arthritis	Musculoskeletal	2.00x10 ⁻⁰⁴	5 / 7
40	TNF, IL6, IL1A, VEGFA, STAT3, LEP, FOS*	6	1	6	Rheumatoid arthritis	Musculoskeletal	2.00x10 ⁻⁰⁴	5 / 7
42	TNF, IL6, IL1A, TLR2, NOS2A, PTGS2, IL8*	6	1	5	Fibrosis	Pathological Condition	1.00x10 ⁻¹⁰	6 / 7

module #	functional module members	core	extnd	hub	disease	disease class	p-value	fraction
43	TNF, IL6, IL1A, TLR2, TLR4, PTGS2, IL8*	6	1	4	Sepsis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 7
47	TNF, IL6, IL1A, VEGFA, CSF2, NOS2A, IL8*	6	1	5	Cystic fibrosis	Respiratory	4.00x10 ⁻⁰⁴	3 / 7
53	TNF, IL6, IL1A, TNFRSF1A, ICAM1, MMP9, MAPK8*	6	1	3	Multiple sclerosis	Nervous System	5.00x10 ⁻⁰⁴	3 / 7
54	TNF, NOS3, VEGFA, NOS2A, PTGS2, EDN1	6	0	4	Preeclampsia	Urogenital	1.00x10 ⁻¹⁰	4 / 6
55	TNF, IL6, IL1A, VEGFA, CCL2*, PTGS2	5	1	5	Rheumatoid arthritis	Musculoskeletal	1.00x10 ⁻¹⁰	5 / 6
59	TNF, IL6, IL1A, TNFRSF1A, TLR4, NFKBIA*	5	1	3	Meningococcal disease	Bacterial Infections	5.00x10 ⁻⁰⁴	2 / 6
62	FGFB*, IL6, VEGFA, TGFB1, IL1A, MMP9	5	1	4	DiGeorge syndrome	Congenital	5.00x10 ⁻⁰⁴	2 / 6
68	TNF, IL6, IL1A, VEGFA, CCL2*, MMP2	5	1	4	Rheumatoid arthritis	Musculoskeletal	1.00x10 ⁻¹⁰	5 / 6
69	FGFB*, IL6, VEGFA, TGFB1, IL1A, MMP2	5	1	4	DiGeorge syndrome	Congenital	5.00x10 ⁻⁰⁴	2 / 6
70	TNF, IL6, IL1A, VEGFA, STAT3, MMP2	6	0	5	Crohn disease	Digestive System	4.00x10 ⁻⁰⁴	3 / 6
73	TNF, IL6, IL1A, JUN*, TGFB1, SERPINE1	5	1	4	Diabetes mellitus	Nutritional and Metabolic	3.00x10 ⁻⁰⁴	4 / 6
83	TNF, IL6, IL1A, VEGFA, STAT3, IL4*	5	1	5	Crohn disease	Digestive System	4.00x10 ⁻⁰⁴	3 / 6
91	TNF, IL6, IL1A, TNFRSF1A, TLR4, IL1R1*	5	1	3	Meningococcal disease	Bacterial Infections	3.00x10 ⁻⁰⁴	2 / 6
93	TNF, IL6, EGFR*, VEGFA, STAT3, INS	5	1	5	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 6
96	TNF, IL6, IL1A, TNFRSF1A, TIMP1, IL10*	5	1	3	Crohn disease	Digestive System	2.00x10 ⁻⁰⁴	3 / 6
98	TNF, IL6, IL1A, TNFRSF1A, ICAM1, IL10*	5	1	3	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 6
101	TNF, NOS3, VEGFA, NOS2A, PTGS2, MAPK3*	5	1	4	Coronary heart disease	Cardiovascular	4.00x10 ⁻⁰⁴	3 / 6
112	TNF, IL6, IL1A, IL10*, CSF2, ICAM1	5	1	3	Crohn disease	Digestive System	1.00x10 ⁻¹⁰	3 / 6
114	AGT, IL6, VEGFA, STAT3, INS, TP53*	5	1	5	Crohn disease	Digestive System	4.00x10 ⁻⁰⁴	3 / 6
115	TNF, IL6, INS, VEGFA, STAT3, TP53*	5	1	5	Crohn disease	Digestive System	4.00x10 ⁻⁰⁴	3 / 6
118	TNF, IL6, IGF1, VEGFA, STAT3, EGFR*	5	1	4	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 6
124	TNF, IL6, IL1A, TLR4, CSF2, IL13*	5	1	3	Meningococcal disease	Bacterial Infections	5.00x10 ⁻⁰⁴	2 / 6
128	TNF, IL6, IL1A, VEGFA, PTGS2, FOS*	5	1	5	Rheumatoid arthritis	Musculoskeletal	1.00x10 ⁻¹⁰	5 / 6
130	AGT, IL6, VEGFA, STAT3, INS, FOS*	5	1	5	Crohn disease	Digestive System	2.00x10 ⁻⁰⁴	3 / 6
133	TNF, IL6, IL1A, TNFRSF1A, ICAM1, RELA*	5	1	3	Crohn disease	Digestive System	2.00x10 ⁻⁰⁴	3 / 6
134	TNF, IL6, IL1A, VEGFA, CCL2*, LEP	5	1	5	Rheumatoid arthritis	Musculoskeletal	1.00x10 ⁻⁰⁴	5 / 6
136	TNF, IL6, INS, JUN*, STAT3, LEP	5	1	5	Crohn disease	Digestive System	5.00x10 ⁻⁰⁴	3 / 6
138	TNF, IL6, INS, SOCS3*, STAT3, LEP	5	1	5	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 6
140	TNF, VCAM1, NOS2A, IL1A, TNFRSF1A, JUN*	5	1	3	Stroke	Cardiovascular	4.00x10 ⁻⁰⁴	4 / 6
143	TNF, VCAM1, NOS2A, IL1A, CD40, VEGFA	5	1	4	Alzheimer's disease	Nervous System	3.00x10 ⁻⁰⁴	4 / 6

module #	functional module members	core	extnd	hub	disease	disease class	p-value	fraction
149	TNF, IL6, IL1A, IFNG*, TGFB1, NOS2A	5	1	5	Fibrosis	Pathological Condition	1.00x10 ⁻⁰⁴	5 / 6
152	TNF, IL6, IL1A, VEGFA, IL18*, NOS2A	5	1	5	Crohn disease	Digestive System	4.00x10 ⁻⁰⁴	3 / 6
156	TNF, IL6, IL1A, TNFRSF1A, IL8*, TLR4	5	1	3	Meningococcal disease	Bacterial Infections	3.00x10 ⁻⁰⁴	2 / 6
157	TNF, IL6, IL1A, TNFRSF1A, TRAF6*, TLR4	5	1	3	Meningococcal disease	Bacterial Infections	4.00x10 ⁻⁰⁴	2 / 6
159	TNF, IL6, IL1A, VEGFA, STAT3, FAS1*	5	1	5	Crohn disease	Digestive System	4.00x10 ⁻⁰⁴	3 / 6
162	TNF, VCAM1, NOS2A, IL1A, TNFRSF1A, MAPK8*	5	1	3	Stroke	Cardiovascular	5.00x10 ⁻⁰⁴	4 / 6
164	TNF, IL6, INS, VEGFA, STAT3, MAPK8*	5	1	5	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 6
169	TNF, NOS3, VEGFA, INS, EDN1	5	0	3	Preeclampsia	Urogenital	3.00x10 ⁻⁰⁴	3 / 5
170	TNF, IKBKB*, TLR4, IL1A, TNFRSF1A	4	1	2	Meningococcal disease	Bacterial Infections	1.00x10 ⁻⁰⁴	2 / 5
171	TNF, VCAM1, NOS2A, IL1B*, TNFRSF1A	4	1	2	Stroke	Cardiovascular	3.00x10 ⁻⁰⁴	4 / 5
173	AGT, NOS3, VEGFA, EDN1, PTGS2	5	0	3	Preeclampsia	Urogenital	2.00x10 ⁻⁰⁴	3 / 5
175	TNF, IKBKB*, TLR4, IL1A, PTGS2	4	1	3	Meningococcal disease	Bacterial Infections	5.00x10 ⁻⁰⁴	2 / 5
181	TNF, MAPK3*, TLR2, TLR4, PTGS2	4	1	2	Meningococcal disease	Bacterial Infections	3.00x10 ⁻⁰⁴	2 / 5
187	TNF, IL6, EGFR*, VEGFA, TGFB1	4	1	4	DiGeorge syndrome	Congenital	3.00x10 ⁻⁰⁴	2 / 5
189	TNF, IL6, IL1A, MMP3, SERPINE1	5	0	3	Coronary heart disease	Cardiovascular	2.00x10 ⁻⁰⁴	3 / 5
195	TNF, IL6, TLR1, TLR2, IL2*	4	1	2	Leprosy	Bacterial Infections	1.00x10 ⁻⁰⁴	3 / 5
198	TNF, IL15, TLR2, NOS2A, IFNG*	4	1	2	Tuberculosis	Bacterial Infections	1.00x10 ⁻¹⁰	4 / 5
200	TNF, IL15, TLR2, NOS2A, IL4*	4	1	2	Malaria	Parasitic	1.00x10 ⁻⁰⁴	3 / 5
201	AGT, NOS3, VEGFA, EDN1, INS	5	0	3	Preeclampsia	Urogenital	2.00x10 ⁻⁰⁴	3 / 5
203	AGT, IL6, JUN*, STAT3, INS	4	1	4	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 5
204	AGT, IL6, SOCS3*, STAT3, INS	4	1	4	Crohn disease	Digestive System	1.00x10 ⁻⁰⁴	3 / 5
208	HIF1A*, VEGFA, EDN1, PTGS2, AGT	4	1	3	Myocardial infarction	Cardiovascular	1.00x10 ⁻⁰⁴	3 / 5
209	FGFB*, IL6, VEGFA, TGFB1, AGT	4	1	4	DiGeorge syndrome	Congenital	3.00x10 ⁻⁰⁴	2 / 5
210	HIF1A*, VEGFA, EDN1, INS, AGT	4	1	3	Preeclampsia	Urogenital	1.00x10 ⁻¹⁰	3 / 5
217	TNF, CASP1*, TNFRSF1A, TLR4, IL1A	4	1	2	Meningococcal disease	Bacterial Infections	3.00x10 ⁻⁰⁴	2 / 5
218	TNF, IRAK1*, TLR2, TLR4, IL1A	4	1	2	Meningococcal disease	Bacterial Infections	4.00x10 ⁻⁰⁴	2 / 5
219	TNF, IL6, IL1A, CSF3*, STAT3	4	1	4	Crohn disease	Digestive System	2.00x10 ⁻⁰⁴	3 / 5
220	TNF, IL6, IL1A, IL2*, STAT3	4	1	4	Crohn disease	Digestive System	3.00x10 ⁻⁰⁴	3 / 5
226	TNF, IL6, IL1A, IL2RA*, STAT3	4	1	4	Crohn disease	Digestive System	2.00x10 ⁻⁰⁴	3 / 5
233	AGT, IL6, VEGFA, TGFB1, ICAM1	5	0	4	DiGeorge syndrome	Congenital	1.00x10 ⁻⁰⁴	2 / 5

module #	functional module members	core	extnd	hub	disease	disease class	p-value	fraction
239	TNF, IL6, IL1A, VEGFA, FGF7*	4	1	4	Rheumatoid arthritis	Musculoskeletal	2.00x10 ⁻⁰⁴	4 / 5
241	ACE, AGT, AGTR1, NPPA, ENSP00000272190*	4	1	1	Renal tubular dysgenesis	Urogenital	1.00x10 ⁻¹⁰	3 / 5
248	APOA4, APOE, APOB, LPL, APOA2*	4	1	0	Hyperlipidemia	Nutritional and Metabolic	3.00x10 ⁻⁰⁴	3 / 5
253	TNF, MAPK3*, TLR2, TLR4, CSF2	4	1	1	Meningococcal disease	Bacterial Infections	2.00x10 ⁻⁰⁴	2 / 5
256	F11, F9, GP1BA, F2, GP9*	4	1	0	Bleeding disorder	Hemic and Lymphatic	3.00x10 ⁻⁰⁴	3 / 5
258	AGT, IL6, VEGFA, TGFB1, FOS*	4	1	4	DiGeorge syndrome	Congenital	1.00x10 ⁻⁰⁴	2 / 5
259	ACE, AGT, AGTR1, NPPA, FOS*	4	1	1	Renal tubular dysgenesis	Urogenital	1.00x10 ⁻¹⁰	3 / 5
260	TNF, IL6, IL1A, SAA1, IL8*	4	1	3	Rheumatoid arthritis	Musculoskeletal	3.00x10 ⁻⁰⁴	4 / 5
263	PPARA, INS, ADIPOQ, LEP, UCP2*	4	1	2	Obesity	Nutritional and Metabolic	1.00x10 ⁻¹⁰	5 / 5
266	TNF, IRS1, INS, LEP, JUN*	4	1	4	Diabetes mellitus	Nutritional and Metabolic	1.00x10 ⁻¹⁰	4 / 5
267	TNF, VCAM1, NOS2A, EDN1, VEGFA	5	0	3	Preeclampsia	Urogenital	4.00x10 ⁻⁰⁴	3 / 5
268	TNF, CD44*, IL1A, MMP9, VEGFA	4	1	3	Rheumatoid arthritis	Musculoskeletal	4.00x10 ⁻⁰⁴	4 / 5
270	TNF, SP1*, TGFB1, SERPINE1, VEGFA	4	1	3	DiGeorge syndrome	Congenital	2.00x10 ⁻⁰⁴	2 / 5
271	TNF, SP1*, INS, SERPINE1, VEGFA	4	1	3	Coronary heart disease	Cardiovascular	4.00x10 ⁻⁰⁴	3 / 5
273	TNF, VCAM1, CD44*, IL1A, VEGFA	4	1	3	Rheumatoid arthritis	Musculoskeletal	3.00x10 ⁻⁰⁴	4 / 5
275	THBS1, TGFB1, MMP9, FGFB*, VEGFA	4	1	2	DiGeorge syndrome	Congenital	2.00x10 ⁻⁰⁴	2 / 5
276	THBS1, TGFB1, MMP2, FGFB*, VEGFA	4	1	2	DiGeorge syndrome	Congenital	2.00x10 ⁻⁰⁴	2 / 5
277	F11, F9, GP1BA, F2, GP5*	4	1	0	Bleeding disorder	Hemic and Lymphatic	1.00x10 ⁻¹⁰	4 / 5
281	HIF1A*, VEGFA, EDN1, PTGS2, NOS2A	4	1	3	Preeclampsia	Urogenital	1.00x10 ⁻¹⁰	4 / 5
287	LEPR, STAT3, INS, LEP, SOCS3*	4	1	3	Hypogonadotropic hypogonadism	Endocrine	2.00x10 ⁻⁰⁴	2 / 5
290	TNF, IL6, IL1B*, TNFRSF1A, TLR4	4	1	2	Meningococcal disease	Bacterial Infections	1.00x10 ⁻⁰⁴	2 / 5
294	TNF, IL6, IL1B*, CSF2, TLR4	4	1	2	Meningococcal disease	Bacterial Infections	2.00x10 ⁻⁰⁴	2 / 5
297	APOB, APOE, LPL, INS, ENSP00000353540*	4	1	1	Hypertriglyceridemia	Nutritional and Metabolic	3.00x10 ⁻⁰⁴	3 / 5
307	OSM*, IL6, VEGFA, PTGS2	3	1	3	Kaposi sarcoma	Neoplasms	5.00x10 ⁻⁰⁴	2 / 4
316	OSM*, IL6, VEGFA, MMP9	3	1	2	Kaposi sarcoma	Neoplasms	5.00x10 ⁻⁰⁴	2 / 4
317	TNF, CXCL12*, VEGFA, MMP9	3	1	2	Myocardial infarction	Cardiovascular	1.00x10 ⁻⁰⁴	4 / 4
324	TNF, CXCL12*, VEGFA, MMP2	3	1	2	Myocardial infarction	Cardiovascular	1.00x10 ⁻¹⁰	4 / 4
325	TNF, MMP14*, VEGFA, MMP2	3	1	2	Asthma	Respiratory	5.00x10 ⁻⁰⁴	3 / 4
329	CTGF*, VEGFA, SERPINE1, TGFB1	3	1	2	DiGeorge syndrome	Congenital	2.00x10 ⁻⁰⁴	2 / 4
333	AGT, CTGF*, VEGFA, TGFB1	3	1	3	DiGeorge syndrome	Congenital	2.00x10 ⁻⁰⁴	2 / 4

module #	functional module members	core	extnd	hub	disease	disease class	p-value	fraction
334	TGFA*, IL6, VEGFA, TGFB1	3	1	3	DiGeorge syndrome	Congenital	2.00x10 ⁻⁰⁴	2 / 4
337	OSM*, IL6, MMP3, SERPINE1	3	1	1	Kaposi sarcoma	Neoplasms	5.00x10 ⁻⁰⁴	2 / 4
339	OSM*, IL6, VEGFA, SERPINE1	3	1	2	Kaposi sarcoma	Neoplasms	5.00x10 ⁻⁰⁴	2 / 4
365	HIF1A*, SLC2A1, EDN1, INS	3	1	1	Growth retardation	Congenital	5.00x10 ⁻⁰⁴	3 / 4
379	AGTR2*, INS, NOS3, AGT	3	1	2	MODY	Nutritional and Metabolic	1.00x10 ⁻¹⁰	3 / 4
381	TNF, IL6, HMOX1, IL10*	3	1	2	Crohn disease	Digestive System	1.00x10 ⁻⁰⁴	3 / 4
383	TNF, IL6, IL23A*, TLR2	3	1	2	Sepsis	Bacterial Infections	4.00x10 ⁻⁰⁴	3 / 4
391	AGTR1, NOS3, AGT, MAPK3*	3	1	1	Renal tubular dysgenesis	Urogenital	5.00x10 ⁻⁰⁴	2 / 4
395	ESR1, VEGFA, IGF1, MAPK3*	3	1	2	Macular degeneration	Eye	1.00x10 ⁻¹⁰	3 / 4
410	TNF, IL6, IL23A*, STAT3	3	1	3	Crohn disease	Digestive System	1.00x10 ⁻¹⁰	3 / 4
411	TNF, IL6, IRF1*, STAT3	3	1	3	Crohn disease	Digestive System	1.00x10 ⁻¹⁰	3 / 4
412	TNF, IL6, LIF*, STAT3	3	1	3	Crohn disease	Digestive System	2.00x10 ⁻⁰⁴	3 / 4
416	TNF, IL6, SYT1*, STAT3	3	1	3	Crohn disease	Digestive System	1.00x10 ⁻⁰⁴	3 / 4
419	TNF, IL6, IL6R*, STAT3	3	1	3	Crohn disease	Digestive System	1.00x10 ⁻⁰⁴	3 / 4
423	TNF, IL6, IL17*, STAT3	3	1	3	Crohn disease	Digestive System	1.00x10 ⁻¹⁰	3 / 4
424	TNF, IL6, STAT1*, STAT3	3	1	3	Crohn disease	Digestive System	1.00x10 ⁻¹⁰	3 / 4
438	AGT, EGR1, TGFB1, EGFR*	3	1	3	Glomerulosclerosis	Urogenital	1.00x10 ⁻¹⁰	3 / 4
445	ESR1, VEGFA, IGF1, EGFR*	3	1	2	Macular degeneration	Eye	2.00x10 ⁻⁰⁴	3 / 4
448	CETP, APOE, LPL, APOA2*	3	1	0	Hyperlipidemia	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	3 / 4
461	ACE, AGT, AGTR2*, NOS3	3	1	1	Renal tubular dysgenesis	Urogenital	3.00x10 ⁻⁰⁴	2 / 4
473	FOXO1A*, IGF1, ESR1, IRS1	3	1	2	Insulin resistance	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	4 / 4
495	UCP3*, INS, LEP, LPL	3	1	2	Hypertriglyceridemia	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	3 / 4
498	JAK2*, LEPR, STAT3, LEP	3	1	2	Hypogonadotropic hypogonadism	Endocrine	3.00x10 ⁻⁰⁴	2 / 4
500	TNF, IL6, CRP, LEP	4	0	3	Macular dystrophy	Eye	3.00x10 ⁻⁰⁴	2 / 4
503	GHR*, INS, IRS1, GH1	3	1	2	Growth retardation	Congenital	1.00x10 ⁻⁰⁴	3 / 4
512	TNF, IL6, HMOX1, VEGFA	4	0	3	Proteinuria	Urogenital	4.00x10 ⁻⁰⁴	3 / 4
514	THBS1, TP53*, MMP2, VEGFA	3	1	1	Adrenocortical carcinoma	Neoplasms	1.00x10 ⁻⁰⁴	3 / 4
515	SMAD3*, SERPINE1, TGFB1, VEGFA	3	1	2	DiGeorge syndrome	Congenital	2.00x10 ⁻⁰⁴	2 / 4
516	THBS1, TGFB1, SPARC*, VEGFA	3	1	2	DiGeorge syndrome	Congenital	2.00x10 ⁻⁰⁴	2 / 4
518	TNF, PTEN*, INS, VEGFA	3	1	3	Hemangioma	Neoplasms	1.00x10 ⁻⁰⁴	2 / 4

module #	functional module members	core	extnd	hub	disease	disease class	<i>p-value</i>	fraction
520	TNF, CXCR4*, STAT3, VEGFA	3	1	3	Proteinuria	Urogenital	2.00x10 ⁻⁰⁴	3 / 4
522	AKT1*, INS, NOS3, VEGFA	3	1	2	MODY	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	3 / 4
525	F12, F11, GP1BA, GP5*	3	1	0	Bleeding disorder	Hemic and Lymphatic	1.00x10 ⁻⁰⁴	3 / 4
527	PIK3R1*, INS, INSR, SLC2A4	3	1	2	Hypoglycemia	Nutritional and Metabolic	2.00x10 ⁻⁰⁴	3 / 4
528	UCP3*, INS, LEP, SLC2A4	3	1	2	Insulin resistance	Nutritional and Metabolic	1.00x10 ⁻⁰⁴	4 / 4
529	APOB, APOE, LPL, VLDLR	4	0	0	Cerebellar ataxia	Nervous System	1.00x10 ⁻⁰⁴	2 / 4
538	PTPN11*, INS, STAT3, LEPR	3	1	2	MODY	Nutritional and Metabolic	1.00x10 ⁻¹⁰	3 / 4
539	NPY*, INS, LEP, LEPR	3	1	2	Hypogonadotropic hypogonadism	Endocrine	1.00x10 ⁻⁰⁴	2 / 4
545	PPARA, INS, ADIPOQ, ADIPOR1	4	0	1	Insulin resistance	Nutritional and Metabolic	1.00x10 ⁻¹⁰	4 / 4
548	TNF, RIPK1*, TNFRSF1A, TLR4	3	1	1	Meningococcal disease	Bacterial Infections	2.00x10 ⁻⁰⁴	2 / 4
556	TNF, CD44*, IL1A, TLR4	3	1	2	Meningococcal disease	Bacterial Infections	2.00x10 ⁻⁰⁴	2 / 4
557	TNF, ITGAM*, CSF2, TLR4	3	1	1	Meningococcal disease	Bacterial Infections	2.00x10 ⁻⁰⁴	2 / 4

Additional File 9 - GO terms enriched in functional modules ($p\text{-value} < 9.80 \times 10^{-03}$, $bf \leq 1.0\%$). Functional modules having at least two significantly associated disease terms were analyzed with AmiGO to find statistically shared GO terms. UniProt-Swiss identifiers were used. The representative GO terms for each functional module were selected by considering background frequency of the term. The proteins in significantly enriched functional modules were separated according to the source as “core” or “extended (extnd)”. Addition to this, the number of hub proteins in each functional module was also determined. The proteins added to the network by extension are indicated with “*”.

module #	functional module members	core	extnd	hub	GO Term	p-value	bf
501	INSR, INS, SLC2A4, LEP	4	0	3	GO:0046323 glucose import	6.50×10^{-06}	22/14916 (0.1%)
					GO:0006112 energy reserve metabolic process	1.10×10^{-05}	26/14916 (0.2%)
					GO:0042593 glucose homeostasis	1.54×10^{-05}	29/14916 (0.2%)
					GO:0033500 carbohydrate homeostasis	1.54×10^{-05}	29/14916 (0.2%)
					GO:0015758 glucose transport	3.56×10^{-05}	38/14916 (0.3%)
565	PROC*, F2, PROS1, F5	3	1	0	GO:0007596 blood coagulation	1.76×10^{-07}	79/14916 (0.5%)
					GO:0050817 coagulation	1.86×10^{-07}	80/14916 (0.5%)
					GO:0007599 hemostasis	2.38×10^{-07}	85/14916 (0.6%)
					GO:0050878 regulation of body fluid levels	4.79×10^{-07}	101/14916 (0.7%)
					GO:0042060 wound healing	7.29×10^{-07}	112/14916 (0.8%)
22	TNF, IL6, IL1A, TLR2, TLR4, CSF2, IL10*	6	1	3	GO:0042035 regulation of cytokine biosynthetic process	4.44×10^{-08}	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	6.59×10^{-08}	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	7.01×10^{-08}	82/14916 (0.5%)
					GO:0050714 positive regulation of protein secretion	3.05×10^{-07}	29/14916 (0.2%)
88	TNF, IL6, TLR1, TLR2, TLR4, IL4*	5	1	2	GO:0042089 cytokine biosynthetic process	1.73×10^{-08}	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	1.84×10^{-08}	82/14916 (0.5%)
					GO:0042035 regulation of cytokine biosynthetic process	6.08×10^{-06}	75/14916 (0.5%)
					GO:0032675 regulation of interleukin-6 production	2.85×10^{-05}	20/14916 (0.1%)
205	IRS2*, INSR, LEP, IRS1, INS	4	1	4	GO:0006112 energy reserve metabolic process	6.42×10^{-12}	26/14916 (0.2%)
					GO:0045725 positive regulation of glycogen biosynthetic process	4.80×10^{-10}	11/14916 (0.1%)
					GO:0032881 regulation of polysaccharide metabolic process	7.20×10^{-10}	12/14916 (0.1%)
					GO:0010962 regulation of glucan biosynthetic process	7.20×10^{-10}	12/14916 (0.1%)
					GO:0032885 regulation of polysaccharide biosynthetic process	7.20×10^{-10}	12/14916 (0.1%)

module #	functional module members	core	extnd	hub	GO Term	<i>p-value</i>	<i>bf</i>
206	APOB, APOE, LPL, INS, LDLR	5	0	1	GO:0034381 lipoprotein particle clearance	7.75x10 ⁻⁰⁶	16/14916 (0.1%)
					GO:0034369 plasma lipoprotein particle remodeling	1.84x10 ⁻⁰⁵	21/14916 (0.1%)
					GO:0034367 macromolecular complex remodeling	1.84x10 ⁻⁰⁵	21/14916 (0.1%)
					GO:0034368 protein-lipid complex remodeling	1.84x10 ⁻⁰⁵	21/14916 (0.1%)
295	INSR, INS, IRS1, LEP, PTPN1*	4	1	4	GO:0006112 energy reserve metabolic process	2.18x10 ⁻⁰⁸	26/14916 (0.2%)
					GO:0008286 insulin receptor signaling pathway	9.64x10 ⁻⁰⁸	37/14916 (0.2%)
					GO:0032869 cellular response to insulin stimulus	1.80x10 ⁻⁰⁷	43/14916 (0.3%)
					GO:0032868 response to insulin stimulus	2.60x10 ⁻⁰⁷	47/14916 (0.3%)
					GO:0032870 cellular response to hormone stimulus	2.60x10 ⁻⁰⁷	47/14916 (0.3%)
					GO:0043434 response to peptide hormone stimulus	7.61x10 ⁻⁰⁷	61/14916 (0.4%)
15	TNF, IL6, IL1A, TLR2, TLR4, CSF2, IFNG*	6	1	3	GO:0001817 regulation of cytokine production	9.64x10 ⁻⁰⁷	139/14916 (0.9%)
					GO:0001816 cytokine production	1.42x10 ⁻⁰⁶	150/14916 (1.0%)
21	TNF, IL6, IL1A, TLR2, NOS2A, CSF2, IL10*	6	1	4	GO:0050714 positive regulation of protein secretion	3.04x10 ⁻⁰⁷	29/14916 (0.2%)
					GO:0051046 regulation of secretion	3.74x10 ⁻⁰⁷	114/14916 (0.8%)
					GO:0050708 regulation of protein secretion	1.57x10 ⁻⁰⁶	43/14916 (0.3%)
					GO:0051222 positive regulation of protein transport	1.73x10 ⁻⁰⁶	44/14916 (0.3%)
					GO:0031960 response to corticosteroid stimulus	2.68x10 ⁻⁰⁶	8/14916 (0.1%)
45	TNF, IL6, IL1A, TLR2, TLR4, CSF2, IL8*	6	1	3	GO:0042035 regulation of cytokine biosynthetic process	1.44x10 ⁻⁰⁵	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	1.97x10 ⁻⁰⁵	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	2.07x10 ⁻⁰⁵	82/14916 (0.5%)
77	TNF, VCAM1, NOS2A, IL1A, TNFRSF1A, IFNG*	5	1	3	GO:0050796 regulation of insulin secretion	2.37x10 ⁻⁰⁵	20/14916 (0.1%)
					GO:0051046 regulation of secretion	2.76x10 ⁻⁰⁵	114/14916 (0.8%)
					GO:0002791 regulation of peptide secretion	4.20x10 ⁻⁰⁵	24/14916 (0.2%)
					GO:0030073 insulin secretion	7.58x10 ⁻⁰⁵	29/14916 (0.2%)
					GO:0046136 positive regulation of vitamin metabolic process	7.77x10 ⁻⁰⁵	2/14916 (0.0%)
79	TNF, IL6, IL1A, TNFRSF1A, NOS2A, IFNG*	5	1	4	GO:0051046 regulation of secretion	9.67x10 ⁻⁰⁸	114/14916 (0.8%)
					GO:0002790 peptide secretion	4.05x10 ⁻⁰⁷	39/14916 (0.3%)
					GO:0030072 peptide hormone secretion	4.05x10 ⁻⁰⁷	39/14916 (0.3%)
					GO:0015833 peptide transport	5.51x10 ⁻⁰⁷	42/14916 (0.3%)
					GO:0046879 hormone secretion	1.68x10 ⁻⁰⁶	55/14916 (0.4%)

module #	functional module members	core	extnd	hub	GO Term	<i>p-value</i>	<i>bf</i>
81	TNF, IL6, TLR1, TLR2, TLR4, IFNG*	5	1	2	GO:0001817 regulation of cytokine production	2.60x10 ⁻⁰⁷	139/14916 (0.9%)
					GO:0001816 cytokine production	3.82x10 ⁻⁰⁷	150/14916 (1.0%)
					GO:0042035 regulation of cytokine biosynthetic process	5.85x10 ⁻⁰⁶	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	8.01x10 ⁻⁰⁶	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	8.42x10 ⁻⁰⁶	82/14916 (0.5%)
129	TNF, IL6, IL1A, VEGFA, TGFB1, FOS*	5	1	5	GO:0051222 positive regulation of protein transport	8.77x10 ⁻⁰⁷	44/14916 (0.3%)
					GO:0051223 regulation of protein transport	8.71x10 ⁻⁰⁶	77/14916 (0.5%)
					GO:0070201 regulation of establishment of protein localization	1.13x10 ⁻⁰⁵	82/14916 (0.5%)
132	TNF, IL6, TLR1, TLR2, TLR4, TLR9*	5	1	2	GO:0042035 regulation of cytokine biosynthetic process	1.13x10 ⁻⁰⁸	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	1.68x10 ⁻⁰⁸	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	1.79x10 ⁻⁰⁸	82/14916 (0.5%)
					GO:0001817 regulation of cytokine production	2.63x10 ⁻⁰⁷	139/14916 (0.9%)
					GO:0001816 cytokine production	3.87x10 ⁻⁰⁷	150/14916 (1.0%)
147	TNF, IL6, TLR1, TLR2, TLR4, MYD88*	5	1	2	GO:0042035 regulation of cytokine biosynthetic process	5.68x10 ⁻⁰⁶	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	7.77x10 ⁻⁰⁶	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	8.16x10 ⁻⁰⁶	82/14916 (0.5%)
					GO:0032675 regulation of interleukin-6 production	2.66x10 ⁻⁰⁵	20/14916 (0.1%)
					GO:0032635 interleukin-6 production	3.10x10 ⁻⁰⁵	21/14916 (0.1%)
150	TNF, IL6, IL1A, IL10*, TGFB1, NOS2A	5	1	5	GO:0051222 positive regulation of protein transport	9.76x10 ⁻¹⁰	44/14916 (0.3%)
					GO:0002697 regulation of immune effector process	4.11x10 ⁻⁰⁹	58/14916 (0.4%)
					GO:0051223 regulation of protein transport	1.77x10 ⁻⁰⁸	77/14916 (0.5%)
					GO:0070201 regulation of establishment of protein localization	2.45x10 ⁻⁰⁸	82/14916 (0.5%)
161	TNF, IL6, TLR1, TLR2, TLR4, TLR7*	5	1	2	GO:0042035 regulation of cytokine biosynthetic process	1.13x10 ⁻⁰⁸	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	1.68x10 ⁻⁰⁸	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	1.79x10 ⁻⁰⁸	82/14916 (0.5%)
					GO:0001817 regulation of cytokine production	2.63x10 ⁻⁰⁷	139/14916 (0.9%)
					GO:0001816 cytokine production	3.87x10 ⁻⁰⁷	150/14916 (1.0%)
225	TNF, IL6, IL1A, IL10*, STAT3	4	1	4	GO:0050714 positive regulation of protein secretion	4.11x10 ⁻⁰⁸	29/14916 (0.2%)
					GO:0048545 response to steroid hormone stimulus	1.28x10 ⁻⁰⁷	38/14916 (0.3%)
					GO:0050708 regulation of protein secretion	2.14x10 ⁻⁰⁷	43/14916 (0.3%)

module #	functional module members	core	extnd	hub	GO Term	<i>p-value</i>	<i>bf</i>
264	TNF, IL6, IL1A, IL1RN*, LEP	4	1	4	GO:0051222 positive regulation of protein transport	2.35x10 ⁻⁰⁷	44/14916 (0.3%)
					GO:0031960 response to corticosteroid stimulus	7.24x10 ⁻⁰⁷	8/14916 (0.1%)
					GO:0019221 cytokine-mediated signaling pathway	1.10x10 ⁻⁰⁶	64/14916 (0.4%)
					GO:0031960 response to corticosteroid stimulus	6.42x10 ⁻⁰⁷	8/14916 (0.1%)
					GO:0051384 response to glucocorticoid stimulus	6.42x10 ⁻⁰⁷	8/14916 (0.1%)
					GO:0050714 positive regulation of protein secretion	4.18x10 ⁻⁰⁵	29/14916 (0.2%)
					GO:0048545 response to steroid hormone stimulus	9.64x10 ⁻⁰⁵	38/14916 (0.3%)
289	INSR, INS, IRS1, LEP, SOCS3*	4	1	4	GO:0006112 energy reserve metabolic process	2.17x10 ⁻⁰⁸	26/14916 (0.2%)
					GO:0045725 positive regulation of glycogen biosynthetic process	1.79x10 ⁻⁰⁶	11/14916 (0.1%)
					GO:0032881 regulation of polysaccharide metabolic process	2.38x10 ⁻⁰⁶	12/14916 (0.1%)
					GO:0010962 regulation of glucan biosynthetic process	2.38x10 ⁻⁰⁶	12/14916 (0.1%)
					GO:0032885 regulation of polysaccharide biosynthetic process	2.38x10 ⁻⁰⁶	12/14916 (0.1%)
					GO:0015980 energy derivation by oxidation of organic compounds	1.00x10 ⁻⁰⁵	115/14916 (0.8%)
433	IGF2, VEGFA, PTGS2, TP53*	3	1	2	NO GO Term enriched in this module		
502	PPARA, INS, UCP3*, LEP	3	1	2	GO:0031331 positive regulation of cellular catabolic process	4.10x10 ⁻⁰³	17/14916 (0.1%)
					GO:0050994 regulation of lipid catabolic process	4.10x10 ⁻⁰³	17/14916 (0.1%)
					GO:0032102 negative regulation of response to external stimulus	8.32x10 ⁻⁰³	24/14916 (0.2%)
					GO:0045834 positive regulation of lipid metabolic process	8.32x10 ⁻⁰³	24/14916 (0.2%)
					GO:0006112 energy reserve metabolic process	9.80x10 ⁻⁰³	26/14916 (0.2%)
561	F10, F9, F2, F8*	3	1	0	GO:0007596 blood coagulation	1.87x10 ⁻⁰⁷	79/14916 (0.5%)
					GO:0050817 coagulation	1.96x10 ⁻⁰⁷	80/14916 (0.5%)
					GO:0007599 hemostasis	2.51x10 ⁻⁰⁷	85/14916 (0.6%)
					GO:0050878 regulation of body fluid levels	5.07x10 ⁻⁰⁷	101/14916 (0.7%)
					GO:0042060 wound healing	7.71x10 ⁻⁰⁷	112/14916 (0.8%)
11	TNF, IL6, IL1A, TLR2, NOS2A, PTGS2, IFNG*	6	1	5	GO:0051046 regulation of secretion	3.52x10 ⁻⁰⁷	114/14916 (0.8%)
					GO:0002790 peptide secretion	9.86x10 ⁻⁰⁷	39/14916 (0.3%)
					GO:0030072 peptide hormone secretion	9.86x10 ⁻⁰⁷	39/14916 (0.3%)
					GO:0015833 peptide transport	1.34x10 ⁻⁰⁶	42/14916 (0.3%)
					GO:0046879 hormone secretion	4.08x10 ⁻⁰⁶	55/14916 (0.4%)
12	TNF, IL6, IL1A, TLR2, TLR4, PTGS2, IFNG*	6	1	4	GO:0001817 regulation of cytokine production	9.89x10 ⁻⁰⁷	139/14916 (0.9%)

module #	functional module members	core	extnd	hub	GO Term	p-value	bf
					GO:0042035 regulation of cytokine biosynthetic process	1.49x10 ⁻⁰⁵	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	2.04x10 ⁻⁰⁵	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	2.14x10 ⁻⁰⁵	82/14916 (0.5%)
13	TNF, IL6, IL1A, TLR2, NOS2A, CSF2, IFNG*	6	1	4	GO:0051046 regulation of secretion	3.48x10 ⁻⁰⁷	114/14916 (0.8%)
					GO:0002790 peptide secretion	9.75x10 ⁻⁰⁷	39/14916 (0.3%)
					GO:0030072 peptide hormone secretion	9.75x10 ⁻⁰⁷	39/14916 (0.3%)
					GO:0015833 peptide transport	1.33x10 ⁻⁰⁶	42/14916 (0.3%)
					GO:0046879 hormone secretion	4.03x10 ⁻⁰⁶	55/14916 (0.4%)
34	TNF, IL6, IL1A, TLR2, TLR4, CSF2, CD14*	6	1	3	GO:0042035 regulation of cytokine biosynthetic process	1.42x10 ⁻⁰⁵	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	1.95x10 ⁻⁰⁵	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	2.05x10 ⁻⁰⁵	82/14916 (0.5%)
44	TNF, IL6, IL1A, TLR2, NOS2A, CSF2	6	1	4	GO:0051046 regulation of secretion	7.82x10 ⁻⁰⁵	114/14916 (0.8%)
					GO:0050714 positive regulation of protein secretion	1.62x10 ⁻⁰⁴	29/14916 (0.2%)
					GO:0002790 peptide secretion	4.04x10 ⁻⁰⁴	39/14916 (0.3%)
71	TNF, IL6, TP53*, VEGFA, STAT3, MMP2	5	1	4	GO:0048545 response to steroid hormone stimulus	2.33x10 ⁻⁰⁴	38/14916 (0.3%)
					GO:0050900 leukocyte migration	6.10x10 ⁻⁰⁴	52/14916 (0.3%)
					GO:0070102 interleukin-6-mediated signaling pathway	6.22x10 ⁻⁰⁴	4/14916 (0.0%)
					GO:0043193 positive regulation of gene-specific transcription	6.47x10 ⁻⁰⁴	53/14916 (0.4%)
					GO:0019221 cytokine-mediated signaling pathway	1.15x10 ⁻⁰³	64/14916 (0.4%)
74	TNF, IL6, IL1A, VEGFA, TGFB1, SERPINE1	6	0	5	GO:0051222 positive regulation of protein transport	8.70x10 ⁻⁰⁷	44/14916 (0.3%)
					GO:0051223 regulation of protein transport	8.65x10 ⁻⁰⁶	77/14916 (0.5%)
					GO:0070201 regulation of establishment of protein localization	1.12x10 ⁻⁰⁵	82/14916 (0.5%)
					GO:0032880 regulation of protein localization	1.42x10 ⁻⁰⁵	87/14916 (0.6%)
80	TNF, IL6, IL1A, TNFRSF1A, TLR4, IFNG*	5	1	3	GO:0001817 regulation of cytokine production	2.73x10 ⁻⁰⁷	139/14916 (0.9%)
					GO:0001816 cytokine production	4.01x10 ⁻⁰⁷	150/14916 (1.0%)
82	TNF, VCAM1, NOS2A, IL1A, TNFRSF1A, IL4*	5	1	3	GO:0050901 leukocyte tethering or rolling	4.93x10 ⁻⁰⁴	4/14916 (0.0%)
					GO:0002697 regulation of immune effector process	6.75x10 ⁻⁰⁴	58/14916 (0.4%)
86	TNF, IL6, IL1A, TNFRSF1A, NOS2A, IL4*	5	1	4	GO:0002697 regulation of immune effector process	2.22x10 ⁻⁰⁶	58/14916 (0.4%)
					GO:0019221 cytokine-mediated signaling pathway	3.32x10 ⁻⁰⁶	64/14916 (0.4%)
					GO:0042089 cytokine biosynthetic process	8.68x10 ⁻⁰⁶	81/14916 (0.5%)

module #	functional module members	core	extnd	hub	GO Term	p-value	bf
87	TNF, IL6, IL1A, TNFRSF1A, TLR4, IL4*	5	1	3	GO:0042107 cytokine metabolic process	9.12x10 ⁻⁰⁶	82/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	1.80x10 ⁻⁰⁸	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	1.92x10 ⁻⁰⁸	82/14916 (0.5%)
92	TNF, IL6, IL1A, TLR2, TLR4, IL1R1*	5	1	3	GO:0019221 cytokine-mediated signaling pathway	3.11x10 ⁻⁰⁶	64/14916 (0.4%)
					GO:0042035 regulation of cytokine biosynthetic process	5.95x10 ⁻⁰⁶	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	8.14x10 ⁻⁰⁶	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	8.56x10 ⁻⁰⁶	82/14916 (0.5%)
					GO:0001817 regulation of cytokine production	7.24x10 ⁻⁰⁵	139/14916 (0.9%)
95	TNF, VCAM1, NOS2A, IL1A, TNFRSF1A, IL10*	5	1	3	GO:0050715 positive regulation of cytokine secretion	2.59x10 ⁻⁰⁵	20/14916 (0.1%)
					GO:0051046 regulation of secretion	3.02x10 ⁻⁰⁵	114/14916 (0.8%)
					GO:0050707 regulation of cytokine secretion	5.89x10 ⁻⁰⁵	26/14916 (0.2%)
					GO:0050714 positive regulation of protein secretion	8.28x10 ⁻⁰⁵	29/14916 (0.2%)
97	TNF, IL6, IL1A, TIMP1, TGFB1, IL10*	5	1	4	GO:0051222 positive regulation of protein transport	9.46x10 ⁻¹⁰	44/14916 (0.3%)
					GO:0051223 regulation of protein transport	1.72x10 ⁻⁰⁸	77/14916 (0.5%)
					GO:0070201 regulation of establishment of protein localization	2.37x10 ⁻⁰⁸	82/14916 (0.5%)
					GO:0032880 regulation of protein localization	3.21x10 ⁻⁰⁸	87/14916 (0.6%)
					GO:0002700 regulation of production of molecular mediator of immune response	3.89x10 ⁻⁰⁸	21/14916 (0.1%)
99	TNF, IL6, IL1A, TNFRSF1A, NOS2A, IL10*	5	1	4	GO:0051046 regulation of secretion	1.05x10 ⁻⁰⁷	114/14916 (0.8%)
					GO:0050714 positive regulation of protein secretion	1.27x10 ⁻⁰⁷	29/14916 (0.2%)
					GO:0050708 regulation of protein secretion	6.61x10 ⁻⁰⁷	43/14916 (0.3%)
					GO:0051222 positive regulation of protein transport	7.27x10 ⁻⁰⁷	44/14916 (0.3%)
100	TNF, IL6, IL1A, TNFRSF1A, TLR4, IL10*	5	1	3	GO:0042035 regulation of cytokine biosynthetic process	1.26x10 ⁻⁰⁸	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	1.86x10 ⁻⁰⁸	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	1.99x10 ⁻⁰⁸	82/14916 (0.5%)
					GO:0050714 positive regulation of protein secretion	1.29x10 ⁻⁰⁷	29/14916 (0.2%)
106	TNF, IL6, IL1A, IL10*, TGFB1, ICAM1	5	1	4	GO:0051222 positive regulation of protein transport	9.72x10 ⁻¹⁰	44/14916 (0.3%)
					GO:0002697 regulation of immune effector process	4.10x10 ⁻⁰⁹	58/14916 (0.4%)
					GO:0051223 regulation of protein transport	1.76x10 ⁻⁰⁸	77/14916 (0.5%)
					GO:0070201 regulation of establishment of protein localization	2.44x10 ⁻⁰⁸	82/14916 (0.5%)
					GO:0032880 regulation of protein localization	3.30x10 ⁻⁰⁸	87/14916 (0.6%)

module #	functional module members	core	extnd	hub	GO Term	<i>p-value</i>	<i>bf</i>
117	AGT, IL6, VEGFA, STAT3, INS, EGFR*	5	1	5	GO:0030335 positive regulation of cell migration	2.34x10 ⁻⁰⁹	52/14916 (0.3%)
					GO:0051272 positive regulation of cell motion	3.77x10 ⁻⁰⁹	57/14916 (0.4%)
					GO:0030334 regulation of cell migration	1.10x10 ⁻⁰⁷	110/14916 (0.7%)
					GO:0051270 regulation of cell motion	1.71x10 ⁻⁰⁷	120/14916 (0.8%)
137	TNF, IL6, IL1A, JUN*, STAT3, LEP	5	1	5	GO:0019221 cytokine-mediated signaling pathway	3.13x10 ⁻⁰⁶	64/14916 (0.4%)
					GO:0050714 positive regulation of protein secretion	8.96x10 ⁻⁰⁵	29/14916 (0.2%)
					GO:0048545 response to steroid hormone stimulus	2.07x10 ⁻⁰⁴	38/14916 (0.3%)
					GO:0050708 regulation of protein secretion	3.02x10 ⁻⁰⁴	43/14916 (0.3%)
					GO:0051222 positive regulation of protein transport	3.24x10 ⁻⁰⁴	44/14916 (0.3%)
139	TNF, IL6, IL1A, SOCS3*, STAT3, LEP	5	1	5	GO:0019221 cytokine-mediated signaling pathway	3.04x10 ⁻⁰⁶	64/14916 (0.4%)
					GO:0050714 positive regulation of protein secretion	8.70x10 ⁻⁰⁵	29/14916 (0.2%)
					GO:0048545 response to steroid hormone stimulus	2.01x10 ⁻⁰⁴	38/14916 (0.3%)
142	TNF, IL6, IL1A, TLR2, TLR4, TRAF6*	5	1	3	GO:0001817 regulation of cytokine production	2.78x10 ⁻⁰⁷	139/14916 (0.9%)
					GO:0042035 regulation of cytokine biosynthetic process	6.26x10 ⁻⁰⁶	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	8.56x10 ⁻⁰⁶	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	9.00x10 ⁻⁰⁶	82/14916 (0.5%)
155	TNF, IL6, IL1A, MYD88*, TLR2, TLR4	5	1	3	GO:0042035 regulation of cytokine biosynthetic process	5.92x10 ⁻⁰⁶	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	8.10x10 ⁻⁰⁶	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	8.52x10 ⁻⁰⁶	82/14916 (0.5%)
					GO:0001817 regulation of cytokine production	7.21x10 ⁻⁰⁵	139/14916 (0.9%)
177	TNF, IL6, TP53*, VEGFA, PTGS2	4	1	4	GO:0009605 response to external stimulus	4.30x10 ⁻⁰⁵	530/14916 (3.6%)
					GO:0050900 leukocyte migration	3.08x10 ⁻⁰⁴	52/14916 (0.3%)
					GO:0043193 positive regulation of gene-specific transcription	3.26x10 ⁻⁰⁴	53/14916 (0.4%)
					GO:0032583 regulation of gene-specific transcription	8.64x10 ⁻⁰⁴	73/14916 (0.5%)
212	TNF, IL15, TLR2, NOS2A, IL10*	4	1	2	GO:0002374 cytokine secretion during immune response	3.06x10 ⁻⁰⁴	4/14916 (0.0%)
					GO:0032715 negative regulation of interleukin-6 production	3.06x10 ⁻⁰⁴	4/14916 (0.0%)
					GO:0002739 regulation of cytokine secretion during immune response	3.06x10 ⁻⁰⁴	4/14916 (0.0%)
					GO:0002740 negative regulation of cytokine secretion during immune response	3.06x10 ⁻⁰⁴	4/14916 (0.0%)
					GO:0002697 regulation of immune effector process	3.15x10 ⁻⁰⁴	58/14916 (0.4%)
214	PPARA, INS, ADIPOQ, LEP, UCP1*	4	1	2	GO:0032102 negative regulation of response to external stimulus	2.34x10 ⁻⁰⁵	24/14916 (0.2%)

module #	functional module members	core	extnd	hub	GO Term	<i>p-value</i>	<i>bf</i>
					GO:0048585 negative regulation of response to stimulus	3.03x10 ⁻⁰⁴	55/14916 (0.4%)
					GO:0010871 negative regulation of receptor biosynthetic process	5.76x10 ⁻⁰⁴	5/14916 (0.0%)
					GO:0010869 regulation of receptor biosynthetic process	8.60x10 ⁻⁰⁴	6/14916 (0.0%)
221	TNF, IL6, IL1A, IFNG*, STAT3	4	1	4	GO:0019221 cytokine-mediated signaling pathway	1.02x10 ⁻⁰⁶	64/14916 (0.4%)
					GO:0048660 regulation of smooth muscle cell proliferation	9.75x10 ⁻⁰⁶	18/14916 (0.1%)
					GO:0051046 regulation of secretion	1.06x10 ⁻⁰⁵	114/14916 (0.8%)
					GO:0048659 smooth muscle cell proliferation	1.36x10 ⁻⁰⁵	20/14916 (0.1%)
					GO:0001817 regulation of cytokine production	2.37x10 ⁻⁰⁵	139/14916 (0.9%)
240	AGT, IL6, VEGFA, PTGS2, TP53*	4	1	4	GO:0032101 regulation of response to external stimulus	7.49x10 ⁻⁰⁶	102/14916 (0.7%)
					GO:0050727 regulation of inflammatory response	1.87x10 ⁻⁰⁴	45/14916 (0.3%)
					GO:0032103 positive regulation of response to external stimulus	2.00x10 ⁻⁰⁴	46/14916 (0.3%)
					GO:0030335 positive regulation of cell migration	2.91x10 ⁻⁰⁴	52/14916 (0.3%)
243	AGT, IL6, VEGFA, TGFB1, EGFR*	4	1	4	GO:0030335 positive regulation of cell migration	3.91x10 ⁻¹⁰	52/14916 (0.3%)
					GO:0051272 positive regulation of cell motion	6.30x10 ⁻¹⁰	57/14916 (0.4%)
					GO:0030334 regulation of cell migration	1.84x10 ⁻⁰⁸	110/14916 (0.7%)
					GO:0051270 regulation of cell motion	2.87x10 ⁻⁰⁸	120/14916 (0.8%)
					GO:0040012 regulation of locomotion	3.67x10 ⁻⁰⁸	126/14916 (0.8%)
247	TNF, IL6, IL1A, TLR4, IL18*	4	1	3	GO:0042089 cytokine biosynthetic process	2.80x10 ⁻⁰⁹	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	2.99x10 ⁻⁰⁹	82/14916 (0.5%)
					GO:0001816 cytokine production	6.48x10 ⁻⁰⁸	150/14916 (1.0%)
					GO:0042033 chemokine biosynthetic process	4.26x10 ⁻⁰⁷	7/14916 (0.0%)
					GO:0050755 chemokine metabolic process	4.26x10 ⁻⁰⁷	7/14916 (0.0%)
255	IRS2*, INSR, LEP, IRS1, IGF1	4	1	3	GO:0010907 positive regulation of glucose metabolic process	1.32x10 ⁻⁰⁹	14/14916 (0.1%)
					GO:0031331 positive regulation of cellular catabolic process	3.13x10 ⁻⁰⁹	17/14916 (0.1%)
					GO:0010676 positive regulation of cellular carbohydrate metabolic process	7.87x10 ⁻⁰⁹	21/14916 (0.1%)
					GO:0010906 regulation of glucose metabolic process	7.87x10 ⁻⁰⁹	21/14916 (0.1%)
					GO:0045913 positive regulation of carbohydrate metabolic process	7.87x10 ⁻⁰⁹	21/14916 (0.1%)
257	TNF, IL6, IL1A, VEGFA, CXCL10*	4	1	4	GO:0050714 positive regulation of protein secretion	4.47x10 ⁻⁰⁵	29/14916 (0.2%)
					GO:0050708 regulation of protein secretion	1.51x10 ⁻⁰⁴	43/14916 (0.3%)
261	TNF, LDLR, INS, APOE, LPL	5	0	2	GO:0032770 positive regulation of monooxygenase activity	3.51x10 ⁻⁰⁶	12/14916 (0.1%)

module #	functional module members	core	extnd	hub	GO Term	<i>p-value</i>	<i>bf</i>
262	TNF, ADIPOQ, INS, LEP, LPL	5	0	3	GO:0032768 regulation of monooxygenase activity	1.30x10 ⁻⁰⁵	18/14916 (0.1%)
					GO:0051353 positive regulation of oxidoreductase activity	1.54x10 ⁻⁰⁵	19/14916 (0.1%)
					GO:0045833 negative regulation of lipid metabolic process	1.82x10 ⁻⁰⁵	20/14916 (0.1%)
					GO:0032102 negative regulation of response to external stimulus	2.78x10 ⁻⁰⁵	24/14916 (0.2%)
					GO:0034113 heterotypic cell-cell adhesion	6.83x10 ⁻⁰⁵	2/14916 (0.0%)
					GO:0034114 regulation of heterotypic cell-cell adhesion	6.83x10 ⁻⁰⁵	2/14916 (0.0%)
269	TNF, SP1*, TGFB1, MMP2, VEGFA	4	1	3	GO:0070587 regulation of cell-cell adhesion involved in gastrulation	6.83x10 ⁻⁰⁵	2/14916 (0.0%)
					GO:0070586 cell-cell adhesion involved in gastrulation	6.83x10 ⁻⁰⁵	2/14916 (0.0%)
					GO:0043536 positive regulation of blood vessel endothelial cell migration	1.91x10 ⁻⁰³	8/14916 (0.1%)
					GO:0022603 regulation of anatomical structure morphogenesis	3.82x10 ⁻⁰³	120/14916 (0.8%)
					GO:0043535 regulation of blood vessel endothelial cell migration	5.33x10 ⁻⁰³	13/14916 (0.1%)
					GO:0010595 positive regulation of endothelial cell migration	5.33x10 ⁻⁰³	13/14916 (0.1%)
278	TNF, ADIPOQ, INS, LEP, SLC2A4	5	0	3	GO:0022407 regulation of cell-cell adhesion	7.17x10 ⁻⁰³	15/14916 (0.1%)
					GO:0032102 negative regulation of response to external stimulus	2.75x10 ⁻⁰⁵	24/14916 (0.2%)
					GO:0034113 heterotypic cell-cell adhesion	6.76x10 ⁻⁰⁵	2/14916 (0.0%)
					GO:0034114 regulation of heterotypic cell-cell adhesion	6.76x10 ⁻⁰⁵	2/14916 (0.0%)
					GO:0070587 regulation of cell-cell adhesion involved in gastrulation	6.76x10 ⁻⁰⁵	2/14916 (0.0%)
					GO:0070586 cell-cell adhesion involved in gastrulation	6.76x10 ⁻⁰⁵	2/14916 (0.0%)
288	TNF, IRS1, INS, LEP, SOCS3*	4	1	4	GO:0050994 regulation of lipid catabolic process	8.63x10 ⁻⁰⁶	17/14916 (0.1%)
					GO:0006112 energy reserve metabolic process	3.30x10 ⁻⁰⁵	26/14916 (0.2%)
					GO:0009896 positive regulation of catabolic process	8.29x10 ⁻⁰⁵	35/14916 (0.2%)
					GO:0046628 positive regulation of insulin receptor signaling pathway	1.90x10 ⁻⁰⁴	3/14916 (0.0%)
					GO:0048585 negative regulation of response to stimulus	3.32x10 ⁻⁰⁴	55/14916 (0.4%)
292	TNF, IL6, IFNB1*, TLR2, TLR4	4	1	2	GO:0051707 response to other organism	2.36x10 ⁻⁰⁵	138/14916 (0.9%)
293	TNF, IL6, RNF36*, TLR2, TLR4	4	1	2	GO:0042035 regulation of cytokine biosynthetic process	3.11x10 ⁻⁰⁴	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	3.93x10 ⁻⁰⁴	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	4.08x10 ⁻⁰⁴	82/14916 (0.5%)
					GO:0045073 regulation of chemokine biosynthetic process	5.18x10 ⁻⁰⁴	6/14916 (0.0%)
299	TNF, IRAK1*, TLR2, TLR4, TLR1	4	1	1	GO:0042108 positive regulation of cytokine biosynthetic process	1.77x10 ⁻⁰⁴	49/14916 (0.3%)
					GO:0042535 positive regulation of tumor necrosis factor biosynthetic process	4.80x10 ⁻⁰⁴	5/14916 (0.0%)

module #	functional module members	core	extnd	hub	GO Term	<i>p-value</i>	<i>bf</i>
348	TNF, IL6, TNFRSF11B, IL4*	3	1	2	GO:0042035 regulation of cytokine biosynthetic process	6.47x10 ⁻⁰⁴	75/14916 (0.5%)
					GO:0042089 cytokine biosynthetic process	8.17x10 ⁻⁰⁴	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	8.48x10 ⁻⁰⁴	82/14916 (0.5%)
					GO:0002700 regulation of production of molecular mediator of immune response	6.18x10 ⁻⁰⁶	21/14916 (0.1%)
					GO:0002440 production of molecular mediator of immune response	2.30x10 ⁻⁰⁵	32/14916 (0.2%)
					GO:0002697 regulation of immune effector process	1.43x10 ⁻⁰⁴	58/14916 (0.4%)
371	CETP, APOE, LPL, INS	4	0	1	GO:0042089 cytokine biosynthetic process	3.95x10 ⁻⁰⁴	81/14916 (0.5%)
					GO:0042107 cytokine metabolic process	4.10x10 ⁻⁰⁴	82/14916 (0.5%)
					GO:0034370 triglyceride-rich lipoprotein particle remodeling	6.07x10 ⁻⁰⁷	10/14916 (0.1%)
					GO:0034372 very-low-density lipoprotein particle remodeling	6.07x10 ⁻⁰⁷	10/14916 (0.1%)
					GO:0034369 plasma lipoprotein particle remodeling	6.73x10 ⁻⁰⁶	21/14916 (0.1%)
					GO:0034367 macromolecular complex remodeling	6.73x10 ⁻⁰⁶	21/14916 (0.1%)
372	APOB, APOE, LPA, LDLR	4	0	0	GO:0034368 protein-lipid complex remodeling	6.73x10 ⁻⁰⁶	21/14916 (0.1%)
					GO:0034381 lipoprotein particle clearance	1.93x10 ⁻⁰⁶	16/14916 (0.1%)
					GO:0032984 macromolecular complex disassembly	9.05x10 ⁻⁰⁵	55/14916 (0.4%)
					GO:0034383 low-density lipoprotein particle clearance	2.58x10 ⁻⁰⁴	5/14916 (0.0%)
					GO:0022411 cellular component disassembly	3.52x10 ⁻⁰⁴	86/14916 (0.6%)
385	GP1BA, F2, F9, VWF*	3	1	0	GO:0007596 blood coagulation	2.02x10 ⁻⁰⁷	79/14916 (0.5%)
					GO:0050817 coagulation	2.12x10 ⁻⁰⁷	80/14916 (0.5%)
					GO:0007599 hemostasis	2.72x10 ⁻⁰⁷	85/14916 (0.6%)
					GO:0050878 regulation of body fluid levels	5.49x10 ⁻⁰⁷	101/14916 (0.7%)
					GO:0042060 wound healing	8.34x10 ⁻⁰⁷	112/14916 (0.8%)
400	TNF, STAT6*, PTGS2, IL1A	3	1	3	GO:0050715 positive regulation of cytokine secretion	4.77x10 ⁻⁰³	20/14916 (0.1%)
					GO:0006954 inflammatory response	5.15x10 ⁻⁰³	211/14916 (1.4%)
					GO:0050707 regulation of cytokine secretion	8.15x10 ⁻⁰³	26/14916 (0.2%)
442	AGTR1, STAT3, AGT, EGFR*	3	1	2	GO:0051341 regulation of oxidoreductase activity	1.36x10 ⁻⁰⁵	29/14916 (0.2%)
					GO:0044062 regulation of excretion	2.78x10 ⁻⁰⁵	2/14916 (0.0%)
					GO:0003078 regulation of natriuresis	2.78x10 ⁻⁰⁵	2/14916 (0.0%)
					GO:0033864 positive regulation of NAD(P)H oxidase activity	2.78x10 ⁻⁰⁵	2/14916 (0.0%)
					GO:0007202 activation of phospholipase C activity	7.74x10 ⁻⁰⁵	51/14916 (0.3%)

module #	functional module members	core	extnd	hub	GO Term	<i>p-value</i>	<i>bf</i>
447	TNF, IL6, TNFRSF11B, IL18*	3	1	2	GO:0042033 chemokine biosynthetic process	1.50x10 ⁻⁰⁷	7/14916 (0.0%)
					GO:0050755 chemokine metabolic process	1.50x10 ⁻⁰⁷	7/14916 (0.0%)
					GO:0032602 chemokine production	7.09x10 ⁻⁰⁷	11/14916 (0.1%)
460	ACE, AGT, AGTR1, NOS3	4	0	1	GO:0050880 regulation of blood vessel size	1.75x10 ⁻⁰⁸	38/14916 (0.3%)
					GO:0035150 regulation of tube size	1.75x10 ⁻⁰⁸	38/14916 (0.3%)
					GO:0003018 vascular process in circulatory system	2.65x10 ⁻⁰⁸	42/14916 (0.3%)
					GO:0019229 regulation of vasoconstriction	1.01x10 ⁻⁰⁶	13/14916 (0.1%)
					GO:0001990 regulation of systemic arterial blood pressure by hormone	1.01x10 ⁻⁰⁶	13/14916 (0.1%)
462	PROC*, F2, THBD, SERPINA5	3	1	0	GO:0007596 blood coagulation	1.50x10 ⁻⁰⁴	79/14916 (0.5%)
					GO:0050817 coagulation	1.56x10 ⁻⁰⁴	80/14916 (0.5%)
					GO:0007599 hemostasis	1.88x10 ⁻⁰⁴	85/14916 (0.6%)
					GO:0050878 regulation of body fluid levels	3.17x10 ⁻⁰⁴	101/14916 (0.7%)
					GO:0042060 wound healing	4.33x10 ⁻⁰⁴	112/14916 (0.8%)
463	PROC*, F2, PROS1, SERPINA5	3	1	0	GO:0007596 blood coagulation	1.45x10 ⁻⁰⁴	79/14916 (0.5%)
					GO:0050817 coagulation	1.51x10 ⁻⁰⁴	80/14916 (0.5%)
					GO:0007599 hemostasis	1.81x10 ⁻⁰⁴	85/14916 (0.6%)
					GO:0050878 regulation of body fluid levels	3.06x10 ⁻⁰⁴	101/14916 (0.7%)
					GO:0042060 wound healing	4.18x10 ⁻⁰⁴	112/14916 (0.8%)
472	IGF1R*, IGF1, ESR1, IRS1	3	1	2	GO:0014065 phosphoinositide 3-kinase cascade	1.26x10 ⁻⁰⁶	14/14916 (0.1%)
					GO:0048009 insulin-like growth factor receptor signaling pathway	1.94x10 ⁻⁰⁶	16/14916 (0.1%)
492	AGTR1, STAT3, AGT, FOS*	3	1	2	GO:0044062 regulation of excretion	2.30x10 ⁻⁰⁵	2/14916 (0.0%)
					GO:0033864 positive regulation of NAD(P)H oxidase activity	2.30x10 ⁻⁰⁵	2/14916 (0.0%)
					GO:0003078 regulation of natriuresis	2.30x10 ⁻⁰⁵	2/14916 (0.0%)
499	TNF, IRS1, IGF1, LEP	4	0	3	GO:0009896 positive regulation of catabolic process	3.17x10 ⁻⁰⁵	35/14916 (0.2%)
					GO:0009894 regulation of catabolic process	3.14x10 ⁻⁰⁴	74/14916 (0.5%)
504	GHR*, IGF1, IRS1, GH1	3	1	1	GO:0048009 insulin-like growth factor receptor signaling pathway	4.26x10 ⁻¹⁰	16/14916 (0.1%)
					GO:0042523 positive regulation of tyrosine phosphorylation of Stat5 protein	1.22x10 ⁻⁰⁷	7/14916 (0.0%)
					GO:0042506 tyrosine phosphorylation of Stat5 protein	1.96x10 ⁻⁰⁷	8/14916 (0.1%)
					GO:0042522 regulation of tyrosine phosphorylation of Stat5 protein	1.96x10 ⁻⁰⁷	8/14916 (0.1%)
					GO:0014065 phosphoinositide 3-kinase cascade	1.27x10 ⁻⁰⁶	14/14916 (0.1%)

module #	functional module members	core	extnd	hub	GO Term	<i>p-value</i>	<i>bf</i>
541	INSR, INS, IRS1, SHC1*	3	1	3	GO:0007169 transmembrane receptor protein tyrosine kinase signaling pathway	1.06x10 ⁻⁰⁵	183/14916 (1.2%)
					GO:0008286 insulin receptor signaling pathway	1.89x10 ⁻⁰⁸	37/14916 (0.2%)
					GO:0032869 cellular response to insulin stimulus	3.53x10 ⁻⁰⁸	43/14916 (0.3%)
					GO:0032868 response to insulin stimulus	5.10x10 ⁻⁰⁸	47/14916 (0.3%)
					GO:0032870 cellular response to hormone stimulus	5.10x10 ⁻⁰⁸	47/14916 (0.3%)
					GO:0043434 response to peptide hormone stimulus	1.49x10 ⁻⁰⁷	61/14916 (0.4%)
542	INSR, IGF1, IRS1, SHC1*	3	1	2	GO:0010907 positive regulation of glucose metabolic process	1.39x10 ⁻⁰⁶	14/14916 (0.1%)
					GO:0031331 positive regulation of cellular catabolic process	2.59x10 ⁻⁰⁶	17/14916 (0.1%)
					GO:0010676 positive regulation of cellular carbohydrate metabolic process	5.07x10 ⁻⁰⁶	21/14916 (0.1%)
					GO:0010906 regulation of glucose metabolic process	5.07x10 ⁻⁰⁶	21/14916 (0.1%)
					GO:0045913 positive regulation of carbohydrate metabolic process	5.07x10 ⁻⁰⁶	21/14916 (0.1%)
					GO:0007169 transmembrane receptor protein tyrosine kinase signaling pathway	1.16x10 ⁻⁰⁵	183/14916 (1.2%)
544	LRP8, VLDLR, APOE, RELN*	3	1	0	GO:0034447 very-low-density lipoprotein particle clearance	1.59x10 ⁻⁰⁴	6/14916 (0.0%)
					GO:0034381 lipoprotein particle clearance	1.27x10 ⁻⁰³	16/14916 (0.1%)
549	TNF, IRAK3*, TLR2, TLR4	3	1	1	GO:0032715 negative regulation of interleukin-6 production	1.80x10 ⁻⁰⁴	4/14916 (0.0%)
					GO:0032655 regulation of interleukin-12 production	1.08x10 ⁻⁰³	9/14916 (0.1%)
					GO:0032615 interleukin-12 production	1.08x10 ⁻⁰³	9/14916 (0.1%)
					GO:0051707 response to other organism	1.71x10 ⁻⁰³	138/14916 (0.9%)
					GO:0001817 regulation of cytokine production	1.75x10 ⁻⁰³	139/14916 (0.9%)
550	TNF, HMGB1*, TLR2, TLR4	3	1	1	NO GO Term enriched in this module		
560	GP1BA, F2, F9, F8*	3	1	0	GO:0007596 blood coagulation	1.80x10 ⁻⁰⁷	79/14916 (0.5%)
					GO:0050817 coagulation	1.89x10 ⁻⁰⁷	80/14916 (0.5%)
					GO:0007599 hemostasis	2.43x10 ⁻⁰⁷	85/14916 (0.6%)
					GO:0050878 regulation of body fluid levels	4.89x10 ⁻⁰⁷	101/14916 (0.7%)
					GO:0042060 wound healing	7.44x10 ⁻⁰⁷	112/14916 (0.8%)
563	TNF, IRS1, INS, MAPK8*	3	1	3	GO:0050994 regulation of lipid catabolic process	3.45x10 ⁻⁰⁶	17/14916 (0.1%)
					GO:0009896 positive regulation of catabolic process	3.32x10 ⁻⁰⁵	35/14916 (0.2%)
					GO:0046628 positive regulation of insulin receptor signaling pathway	1.14x10 ⁻⁰⁴	3/14916 (0.0%)
					GO:0019216 regulation of lipid metabolic process	2.65x10 ⁻⁰⁴	69/14916 (0.5%)
					GO:0009894 regulation of catabolic process	3.28x10 ⁻⁰⁴	74/14916 (0.5%)

Additional File 10 – Diseases present in the CFN-G. The associations between the cardiovascular disorders and the diseases present in the CFN-G graph were manually searched from the literature.

Disease Name	Disease Class	Ref		Disease Name	Disease Class	Ref
Adenocarcinoma	Neoplasms	None		Insulin resistance	Nutritional and Metabolic	[1-3]
Adrenocortical carcinoma	Neoplasms	None		Kaposi sarcoma	Neoplasms	None
Alzheimer's disease	Nervous System	[4-8]		Leprosy	Bacterial Infections	None
Angioedema	Cardiovascular	[9, 10]		Listeria monocytogenes	Bacterial Infections	None
Arthropathy	Musculoskeletal	[11]		Macular degeneration	Eye	[12]
Asthma	Respiratory	[13, 14]		Macular dystrophy	Eye	None
Atherosclerosis	Cardiovascular	[15, 16]		Malaria	Parasitic	[17]
Bleeding disorder	Hemic and Lymphatic	-		Meningococcal disease	Bacterial Infections	None
Cerebellar ataxia	Nervous System	[18]		MODY	Nutritional and Metabolic	[19]
Cervical carcinoma	Neoplasms	None		Multiple sclerosis	Nervous System	[20, 21]
Coronary heart disease	Cardiovascular	-		Myasthenia	Nervous System	None
Crohn disease	Digestive System	[14, 22]		Myocardial infarction	Cardiovascular	[16, 23]
Cystic fibrosis	Respiratory	[22]		Obesity	Nutritional and Metabolic	[1, 24]
Dementia	Nervous System	[7, 25]		Osteoporosis	Musculoskeletal	[26, 27]
Diabetes mellitus	Nutritional and Metabolic	[1, 2, 9, 28-33]		Paget disease	Neoplasms	[26, 27]
DiGeorge syndrome	Congenital	[34, 35]		Polypsis	Neoplasms	[36]
Epidermolysis bullosa	Congenital	None		Preeclampsia	Urogenital	[37, 38]
Fibrosis	Pathological Condition	-		Protein S deficiency	Hemic and Lymphatic	None
Glomerulosclerosis	Urogenital	[39]		Proteinuria	Urogenital	[20]
Growth retardation	Congenital	[40]		Renal tubular dysgenesis	Urogenital	[41]
Hemangioma	Neoplasms	None		Rheumatoid arthritis	Musculoskeletal	[14, 42]
Hemorrhagic diathesis	Hemic and Lymphatic	None		Sepsis	Bacterial Infections	[43]
Hypercholesterolemia	Nutritional and Metabolic	[28]		Short stature	Musculoskeletal	[44]
Hyperlipidemia	Nutritional and Metabolic	[1, 45, 46]		Stroke	Cardiovascular	[16, 47]
Hyperlipoproteinemia	Nutritional and Metabolic	[16]		Supranuclear palsy	Nervous System	[48]
Hypertension	Cardiovascular	[1, 10, 28]		Thrombophilia	Hemic and Lymphatic	[49]
Hypertriglyceridemia	Nutritional and Metabolic	[46]		Tuberculosis	Bacterial Infections	[50]
Hypoglycemia	Nutritional and Metabolic	[33]		Venous thrombosis	Cardiovascular	[51, 52]
Hypogonadotropic hypogonadism	Endocrine	[53]		von Willebrand disease	Hemic and Lymphatic	[54]

REFERENCES FOR ADDITIONAL FILE 10

1. Huang P: **eNOS, metabolic syndrome and cardiovascular disease.** *Trends in Endocrinology & Metabolism* 2009, **20**:295-302.
2. Lee S, Park S, Ko S, Yim H, Ahn Y, Yoon K, Cha B, Son H, Kwon H: **Insulin resistance and inflammation may have an additional role in the link between cystatin C and cardiovascular disease in type 2 diabetes mellitus patients.** *Metabolism* 2010, **59**:241-246.
3. Biddinger S, Hernandez-Ono A, Rask-Madsen C, Haas J, Alemán J, Suzuki R, Scapa E, Agarwal C, Carey M, Stephanopoulos G, et al: **Hepatic insulin resistance is sufficient to produce dyslipidemia and susceptibility to atherosclerosis.** *Cell Metabolism* 2008, **7**:125-134.
4. Mans R, Chowdhury N, Cao D, McMahon L, Li L: **Simvastatin enhances hippocampal long-term potentiation in C57BL/6 mice.** *Neuroscience* 2009, doi:10.1016/j.neuroscience.2009.12.062.
5. Nilsson K, Gustafson L, Nornholm M, Hultberg B: **Plasma homocysteine, apolipoprotein E status and vascular disease in elderly patients with mental illness.** *Clinical Chemistry and Laboratory Medicine* 2010, **48**:129-135.
6. Milionis H, Florentin M, Giannopoulos S: **Metabolic syndrome and Alzheimer's disease: a link to a vascular hypothesis?** *CNS Spectrums* 2008, **13**:606-613.
7. Sleegers K, Lambert J, Bertram L, Cruts M, Amouyel P, Van Broeckhoven C: **The pursuit of susceptibility genes for Alzheimer's disease: progress and prospects.** *Trends in Genetics* 2010, **26**:84-93.
8. Ray M, Ruan J, Zhang W: **Variations in the Transcriptome of Alzheimer's Disease Reveal Molecular Networks Involved in Cardiovascular Disease.** *Genome Biology* 2008, **9**:R148.
9. Nickenig G, Ostergren J, Struijker-Boudier H: **Clinical evidence for the cardiovascular benefits of angiotensin receptor blockers.** *Journal of Renin Angiotensin Aldosterone Systems* 2006, **7**:S1-S7.
10. Quaschnig T: **Vasopeptidase inhibition for blood pressure control: emerging experience.** *Current Pharmaceutical Design* 2005, **11**:3293-3299.
11. Mannucci P, Schutgens R, Santagostino E, Mauser-Bunschoten E: **How I treat age-related morbidities in elderly persons with hemophilia.** *Blood* 2009, **114**:5256-5263.
12. Tan J, Wang J, Liew G, Rochtchina E, Mitchell P: **Age-related macular degeneration and mortality from cardiovascular disease or stroke.** *British Journal of Ophthalmology* 2008, **92**:509-512.
13. Appleton S, Ruffin R, Wilson D, Taylor A, Adams R: **Cardiovascular disease risk associated with asthma and respiratory morbidity might be mediated by short-acting beta2-agonists.** *Journal of Allergy and Clinical Immunology* 2009, **123**:124-130.
14. Coulthard L, White D, Jones D, McDermott M, Burchill S: **p38MAPK: stress responses from molecular mechanisms to therapeutics.** *Trends in Molecular Medicine* 2009, **15**:369-379.
15. Kampoli A, Tousoulis D, Antoniades C, Siasosa G, Stefanadis C: **Biomarkers of premature atherosclerosis.** *Trends in Molecular Medicine* 2009, **15**:323-332.
16. Duval C, Chinetti G, Trottein F, Fruchart J, Staels B: **The role of PPARs in atherosclerosis.** *Trends in Molecular Medicine* 2002, **8**:422-430.
17. Febbraio M, Silverstein R: **CD36: implications in cardiovascular disease.** *International Journal of Biochemistry and Cell Biology* 2007, **39**:2012-2030.
18. Becker E, Oliver P, Glitsch M, Banks G, Achilli F, Hardy A, Nolan P, Fisher E, Davies K: **A point mutation in TRPC3 causes abnormal Purkinje cell development and cerebellar ataxia in moonwalker mice.** *PNAS* 2009, **106**:6706-6711.
19. Nielsen L, Christoffersen C, Ahnström J, Dahlbäck B: **ApoM: gene regulation and effects on HDL metabolism.** *Trends in Endocrinology & Metabolism* 2009, **20**:66-71.
20. Rizvi M, Pathak D, Freedman J, Chakrabarti S: **CD40-CD40 ligand interactions in oxidative stress, inflammation and vascular disease.** *Trends in Molecular Medicine* 2008, **14**:530-538.
21. Rybakowski J: **Matrix Metalloproteinase-9 (MMP9)-A Mediating Enzyme in Cardiovascular Disease, Cancer, and Neuropsychiatric Disorders.** *Cardiovascular Psychiatry and Neurology* 2009, **904836**.

22. Nofziger C, Brown K, Smith C, Harrington W, Murray D, Bisi J, Ashton T, Maurio F, Kalsi K, West T, et al: **PPARgamma agonists inhibit vasopressin-mediated anion transport in the MDCK-C7 cell line.** *American Journal of Physiology* 2009, **297**:F55-F62.
23. Barry S, Townsend P, Latchman D, Stephanou A: **Role of the JAKSTAT Pathway in Myocardial Injury.** *Trends in Molecular Medicine* 2007, **13**:82-89.
24. van Gaal L, Mertens I, De Block C: **Mechanisms Linking Obesity with Cardiovascular Disease.** *Nature* 2006, **444**:875-880.
25. Rosvall L, Rizzuto D, Wang H, Winblad B, Graff C, Fratiglioni L: **APOE-related mortality: effect of dementia, cardiovascular disease and gender.** *Neurobiology of Aging* 2009, **30**:1545-1551.
26. Wada T, Nakashima T, Hiroshi N, Penninger J: **RANKL-RANK signaling in osteoclastogenesis and bone disease.** *Trends in Molecular Medicine* 2006, **12**:17-25.
27. Persy V, D'Haese P: **Vascular calcification and bone disease: the calcification paradox.** *Trends in Molecular Medicine* 2009, **15**:405-416.
28. Silverborn M, Jeppsson A, Mårtensson G, Nilsson F: **New-onset cardiovascular risk factors in lung transplant recipients.** *Journal of Heart and Lung Transplantation* 2005, **24**:1536-1543.
29. Xiong W, Stern D: **The marriage of glucose and blood vessels: It isn't all that sweet.** *Cell Metabolism* 2005, **2**:212-215.
30. Kirpichnikov D, Sowers J: **Diabetes mellitus and diabetes-associated vascular disease.** *Trends in Endocrinology and Metabolism* 2001, **12**:225-230.
31. Preis S, Pencina M, Hwang S, D'Agostino RS, Savage P, Levy D, Fox C: **Trends in cardiovascular disease risk factors in individuals with and without diabetes mellitus in the Framingham Heart Study.** *Circulation* 2009, **120**:212-220.
32. Gore M, McGuire D: **Cardiovascular disease and type 2 diabetes mellitus: regulating glucose and regulating drugs.** *Current Cardiology Reports* 2009, **11**:258-263.
33. Park L, Wexler D: **Update in diabetes and cardiovascular disease: synthesizing the evidence from recent trials of glycemic control to prevent cardiovascular disease.** *Current Opinion in Lipidology* 2010, **21**:8-14.
34. Calmont A, Ivins S, Van Bueren K, Papangeli I, Kyriakopoulou V, Andrews W, Martin J, Moon A, Illingworth E, Basson M, Scambler P: **Tbx1 controls cardiac neural crest cell migration during arch artery development by regulating Gbx2 expression in the pharyngeal ectoderm.** *Development* 2009, **136**:3173-3183.
35. Merscher S, Funke B, Epstein J, Heyer J, Puech A, Lu M, Xavier R, Demay M, Russell R, Factor S, et al: **TBX1 Is Responsible for Cardiovascular Defects in Velo-Cardio-Facial/DiGeorge Syndrome.** *Cell* 2001, **104**:619-629.
36. Subbaramaiah K, Dannenberg A: **Cyclooxygenase 2: a molecular target for cancer prevention and treatment.** *Trends in Pharmacological Sciences* 2003, **24**:96-102.
37. Blumenstein M, McMaster M, Black M, Wu S, Prakash R, Cooney J, McCowan L, Cooper G, North R: **A proteomic approach identifies early pregnancy biomarkers for preeclampsia: novel linkages between a predisposition to preeclampsia and cardiovascular disease.** *Proteomics* 2009, **9**:2929-2945.
38. Harskamp R, Zeeman G: **Preeclampsia: at risk for remote cardiovascular disease.** *American Journal of the Medical Sciences* 2007, **334**:291-295.
39. Ruan X, Zheng F, Guan Y: **PPARs and the kidney in metabolic syndrome.** *American Journal of Physiology* 2008, **294**:F1032-F1047.
40. Klammt J, Pfäffle R, Werner H, Kiess W: **IGF signaling defects as causes of growth failure and IUGR.** *Trends in Endocrinology & Metabolism* 2008, **19**:197-205.
41. Delaney D, Kennedy S, Tobias V, Farnsworth R: **Congenital Unilateral Renal Tubular Dysgenesis and Severe Neonatal Hypertension.** *Pediatric Nephrology* 2009, **24**:863-867.
42. Peters M, van Halm V, Nurmohamed M, Damoiseaux J, Tervaert J, Twisk J, Dijkmans B, Voskuyl A: **Relations between autoantibodies against oxidized low-density lipoprotein, inflammation, subclinical atherosclerosis, and cardiovascular disease in rheumatoid arthritis.** *Journal of Rheumatology* 2008, **35**:1495-1499.
43. Hackam D, Mamdani M, Li P, Redelmeier D: **Statins and sepsis in patients with cardiovascular disease: a population-based cohort analysis.** *Lancet* 2006, **367**:413-418.
44. Paajanen P, Kuukasjärvi P: **Is short stature associated with coronary heart disease?: A systematic review of the literature and a meta-analysis.** *International Journal of Cardiology* 2007, **119**:S13-S14.

45. Nordestgaard B, Langsted A, Freiberg J: **Nonfasting hyperlipidemia and cardiovascular disease.** *Current Drug Targets* 2009, **10**:328-335.
46. Austin M, McKnight B, Edwards K, Bradley C, McNeely M, Psaty B, Brunzell J, Motulsky A: **Cardiovascular disease mortality in familial forms of hypertriglyceridemia: A 20-year prospective study.** *Circulation* 2000, **101**:2777-2782.
47. Gulcher J, Gretarsdottir S, Helgadóttir A, Stefansson K: **Genes contributing to risk for common forms of stroke.** *Trends in Molecular Medicine* 2005, **11**:217-224.
48. Brodacki B, Staszewski J, Toczyłowska B, Kozłowska E, Drela N, Chalimoniuk M, Stepień A: **Serum interleukin (IL-2, IL-10, IL-6, IL-4), TNF α , and INF γ concentrations are elevated in patients with atypical and idiopathic parkinsonism.** *Neuroscience Letters* 2008, **441**:158-162.
49. Voetsch B, Loscalzo J: **Genetics of thrombophilia: impact on atherogenesis.** *Current Opinion in Lipidology* 2004, **15**:129-143.
50. Major A, Joyce S, Van Kaer L: **Lipid metabolism, atherogenesis and CD1-restricted antigen presentation.** *Trends in Molecular Medicine* 2006, **12**:270-278.
51. van der Hagen P, Folsom A, Jenny N, Heckbert S, O'Meara E, Reich L, Rosendaal F, Cushman M: **Subclinical atherosclerosis and the risk of future venous thrombosis in the Cardiovascular Health Study.** *Journal of Thrombosis and Haemostasis* 2006, **4**:1903-1908.
52. Quist-Paulsen P, Naess I, Cannegieter S, Romundstad P, Christiansen S, Rosendaal F, Hammerstrøm J: **Arterial cardiovascular risk factors and venous thrombosis: results from a population-based, prospective study (the HUNT 2).** *Haematologica* 2010, **95**:119-125.
53. Erem C, Kocak M, Hacıhasanoglu A, Yilmaz M: **Blood coagulation and fibrinolysis in male patients with hypogonadotropic hypogonadism: plasma factor V and factor X activities increase in hypogonadotropic hypogonadism.** *Journal of Endocrinology Investigation* 2008, **31**:537-541.
54. Gresele P, Agnelli G: **Novel approaches to the treatment of thrombosis.** *Trends in Pharmacological Sciences* 2002, **23**:25-32.

Additional File 11 – The complete list of the disease pairs showing significant associations. Each of the disease pairs on CFN-G was scored in terms of shared proteins among the diseases. Each disease pair is listed in this file along with the number and the names of the proteins that are shared between, as well as the score that is assigned to the association, *p-value* and FDR. The proteins added to the network by extension are indicated with “*”.

Disease 1	Disease 2	# of shared proteins	shared proteins	DOS	<i>p-value</i>	FDR
Adenocarcinoma (Cancer)	Cervical_carcinoma (Cancer)	2	PTGS2,TP53*	0.667	8.05x10 ⁻¹¹	0.00000
Adrenocortical_carcinoma (Cancer)	DiGeorge_syndrome (multiple)	1	VEGFA	0.250	1.08x10 ⁻⁰²	0.04317
Adrenocortical_carcinoma (Cancer)	Cervical_carcinoma (Cancer)	1	TP53*	0.250	2.05x10 ⁻⁰²	0.06049
Adrenocortical_carcinoma (Cancer)	Adenocarcinoma (Cancer)	2	VEGFA,TP53*	0.500	5.06x10 ⁻⁰⁶	0.00005
Alzheimer_disease (Neurological)	DiGeorge_syndrome (multiple)	2	TGFB1,VEGFA	0.333	1.26x10 ⁻⁰⁴	0.00093
Asthma (Respiratory)	Meningococcal_disease (Immunological)	1	TNF	0.250	1.53x10 ⁻⁰²	0.04981
Atherosclerosis (Cardiovascular)	Hyperlipoproteinemia (Metabolic)	3	LDLR,LPL,APOE	0.429	2.08x10 ⁻⁰⁵	0.00020
Atherosclerosis (Cardiovascular)	Hypertriglyceridemia (Metabolic)	3	LPL,APOE,INS	0.375	5.97x10 ⁻⁰⁴	0.00347
Bleeding_disorder (Hematological)	Hemorrhagic_diathesis (Hematological)	2	F8*,F9	0.286	1.33x10 ⁻⁰³	0.00655
Bleeding_disorder (Hematological)	Arthropathy (Bone)	2	F8*,F10	0.286	5.91x10 ⁻⁰⁴	0.00355
Cerebellar_ataxia (Neurological)	Hypercholesterolemia (Metabolic)	1	APOB	0.250	1.15x10 ⁻⁰²	0.04339
Cerebellar_ataxia (Neurological)	Dementia (Neurological)	1	VLDLR	0.250	1.26x10 ⁻⁰²	0.04469
Cerebellar_ataxia (Neurological)	Hyperlipidemia (Metabolic)	1	APOB	0.200	4.00x10 ⁻⁰²	0.10518
Coronary_heart_disease (Cardiovascular)	Meningococcal_disease (Immunological)	1	TNF	0.200	2.03x10 ⁻⁰²	0.06091
Cystic_fibrosis (Respiratory)	Meningococcal_disease (Immunological)	1	TNF	0.250	1.50x10 ⁻⁰²	0.04964
DiGeorge_syndrome (multiple)	Glomerulosclerosis (Renal)	1	TGFB1	0.250	1.98x10 ⁻⁰²	0.06045
DiGeorge_syndrome (multiple)	Adenocarcinoma (Cancer)	1	VEGFA	0.250	3.26x10 ⁻⁰²	0.08940
DiGeorge_syndrome (multiple)	Macular_degeneration (Ophthalmological)	1	VEGFA	0.200	3.48x10 ⁻⁰²	0.09289
DiGeorge_syndrome (multiple)	Asthma (Respiratory)	1	VEGFA	0.250	8.92x10 ⁻⁰³	0.03645
Epidermolysis_bullosa (Dermatological)	Protein_S_deficiency (Hematological)	2	PROC*,PROS1	1.000	0	0.00000
Epidermolysis_bullosa (Dermatological)	Angioedema (Immunological)	2	PROC*,PROS1	1.000	0	0.00000
Fibrosis (Ophthalmological)	Cystic_fibrosis (Respiratory)	3	TNF,CSF2,IL8*	0.188	1.47x10 ⁻⁰²	0.04968
Fibrosis (Ophthalmological)	Glomerulosclerosis (Renal)	3	TGFB1,AGT,EGFR*	0.188	1.61x10 ⁻⁰²	0.05083

Disease 1	Disease 2	# of shared proteins	shared proteins	DOS	<i>p-value</i>	FDR
Growth_retardation (Developmental)	Hypertriglyceridemia (Metabolic)	3	LEP,INSR,INS	0.300	1.12x10 ⁻⁰²	0.04298
Hemangioma (Cancer)	Adrenocortical_carcinoma (Cancer)	1	VEGFA	0.250	1.10x10 ⁻⁰²	0.04321
Hemangioma (Cancer)	Adenocarcinoma (Cancer)	1	VEGFA	0.250	1.34x10 ⁻⁰²	0.04667
Hemangioma (Cancer)	Asthma (Respiratory)	1	VEGFA	0.250	1.47x10 ⁻⁰²	0.05057
Hemangioma (Cancer)	Macular_degeneration (Ophthamological)	1	VEGFA	0.200	4.16x10 ⁻⁰²	0.10385
Hemangioma (Cancer)	DiGeorge_syndrome (multiple)	1	VEGFA	0.333	5.64x10 ⁻⁰³	0.02518
Hemorrhagic_diathesis (Hematological)	Arthropathy (Bone)	1	F8*	0.333	9.56x10 ⁻⁰⁴	0.00524
Hypercholesterolemia (Metabolic)	Hyperlipoproteinemia (Metabolic)	2	LDLR,APOE	0.400	1.45x10 ⁻⁰⁴	0.00103
Hypercholesterolemia (Metabolic)	Hyperlipidemia (Metabolic)	2	APOE,APOB	0.400	5.68x10 ⁻⁰⁵	0.00045
Hypercholesterolemia (Metabolic)	Atherosclerosis (Cardiovascular)	3	LDLR,APOE,APOB	0.500	9.92x10 ⁻⁰⁸	0.00000
Hyperlipidemia (Metabolic)	Atherosclerosis (Cardiovascular)	3	APOB,APOE,CETP	0.429	3.26x10 ⁻⁰⁵	0.00030
Hypertension (Cardiovascular)	Renal_tubular_dysgenesis (Renal)	3	AGTR1,AGT,ACE	0.750	1.57x10 ⁻¹⁴	0.00000
Hypertriglyceridemia (Metabolic)	Hyperlipoproteinemia (Metabolic)	2	LPL,APOE	0.286	8.74x10 ⁻⁰³	0.03648
Hypoglycemia (Metabolic)	Hypertriglyceridemia (Metabolic)	3	LEP,INSR,INS	0.429	2.11x10 ⁻⁰⁴	0.00145
Hypoglycemia (Metabolic)	Growth_retardation (Developmental)	3	LEP,INSR,INS	0.300	5.04x10 ⁻⁰³	0.02305
Hypoglycemia (Metabolic)	Obesity (Nutritional)	4	LEP,INSR,PPARA,INS	0.286	7.76x10 ⁻⁰³	0.03313
Insulin_resistance (Metabolic)	Obesity (Nutritional)	11	IRS1,IRS2*,INS,LEP,INSR,TNF,PPARA,MAPK8*,UCP3*,PTPN1*,ADIPOQ	0.550	4.13x10 ⁻⁰⁴	0.00264
Kaposi_sarcoma (Immunological)	Macular_dystrophy (Ophthamological)	1	IL6	0.333	1.28x10 ⁻⁰³	0.00649
Kaposi_sarcoma (Immunological)	Paget_disease (Bone)	1	IL6	0.333	1.51x10 ⁻⁰³	0.00723
Leprosy (Immunological)	Crohn_disease (Gastrointestinal)	2	IL10*,TNF	0.222	4.11x10 ⁻⁰²	0.10661
Leprosy (Immunological)	Meningococcal_disease (Immunological)	1	TNF	0.200	4.41x10 ⁻⁰²	0.10864
Macular_dystrophy (Ophthamological)	Paget_disease (Bone)	1	IL6	0.333	1.59x10 ⁻⁰³	0.00744
Malaria (Immunological)	Stroke (Cardiovascular)	3	IL4*,TNF,NOS2A	0.500	1.05x10 ⁻⁰⁶	0.00001
Malaria (Immunological)	Meningococcal_disease (Immunological)	2	TNF,TLR4	0.500	1.84x10 ⁻⁰⁷	0.00000
Malaria (Immunological)	Tuberculosis (Respiratory)	2	TNF,NOS2A	0.250	2.07x10 ⁻⁰²	0.05934
Malaria (Immunological)	Sepsis (Immunological)	2	TNF,TLR4	0.250	2.90x10 ⁻⁰²	0.08175
Multiple_sclerosis (Neurological)	Meningococcal_disease (Immunological)	1	TNF	0.250	2.07x10 ⁻⁰²	0.06022
Multiple_sclerosis (Neurological)	Myocardial_infarction (Cardiovascular)	2	TNF,MMP9	0.250	6.99x10 ⁻⁰³	0.03049

Disease 1	Disease 2	# of shared proteins	shared proteins	DOS	p-value	FDR
Myocardial_infarction (Cardiovascular)	Asthma (Respiratory)	3	VEGFA,TNF,MMP2	0.429	1.32x10 ⁻⁰⁶	0.00002
Myocardial_infarction (Cardiovascular)	Macular_degeneration (Ophthalmological)	2	IGF1,VEGFA	0.222	4.44x10 ⁻⁰²	0.10779
Myocardial_infarction (Cardiovascular)	Coronary_heart_disease (Cardiovascular)	2	TNF,SERPINE1	0.222	4.51x10 ⁻⁰²	0.10835
Osteoporosis (Bone)	Asthma (Respiratory)	2	TNF,MMP2	0.222	1.90x10 ⁻⁰²	0.05896
Osteoporosis (Bone)	Paget_disease (Bone)	2	IL6,TNFRSF11B	0.250	9.92x10 ⁻⁰⁴	0.00529
Polyposis (Cancer)	Adenocarcinoma (Cancer)	2	PTGS2,TP53*	0.500	4.95x10 ⁻⁰⁶	0.00006
Polyposis (Cancer)	Cervical_carcinoma (Cancer)	2	PTGS2,TP53*	0.667	5.77x10 ⁻¹¹	0.00000
Protein_S_deficiency (Hematological)	Angioedema (Immunological)	2	PROC*,PROS1	1.000	0	0.00000
Proteinuria (Renal)	Asthma (Respiratory)	2	TNF,VEGFA	0.333	2.70x10 ⁻⁰⁴	0.00179
Proteinuria (Renal)	Alzheimer_disease (Neurological)	2	TGFB1,VEGFA	0.222	4.81x10 ⁻⁰²	0.11409
Proteinuria (Renal)	DiGeorge_syndrome (multiple)	2	TGFB1,VEGFA	0.400	7.62x10 ⁻⁰⁶	0.00008
Sepsis (Immunological)	Leprosy (Immunological)	2	TLR2,TNF	0.250	1.54x10 ⁻⁰²	0.04914
Sepsis (Immunological)	Meningococcal_disease (Immunological)	2	TNF,TLR4	0.333	6.24x10 ⁻⁰⁵	0.00048
Short_stature (Skeletal)	Growth_retardation (Developmental)	3	IGF1,GH1,GHR*	0.375	3.46x10 ⁻⁰⁵	0.00030
Stroke (Cardiovascular)	Listeria_monocytogenes (Immunological)	2	NOS2A,TNFRSF1A	0.333	8.18x10 ⁻⁰⁴	0.00462
Supranuclear_palsy (Neurological)	Hypercholesterolemia (Metabolic)	1	APOE	0.250	1.26x10 ⁻⁰²	0.04549
Supranuclear_palsy (Neurological)	Dementia (Neurological)	2	APOE,RELN*	0.667	2.80x10 ⁻¹¹	0.00000
Supranuclear_palsy (Neurological)	Hyperlipidemia (Metabolic)	1	APOE	0.200	3.18x10 ⁻⁰²	0.08836
Supranuclear_palsy (Neurological)	Hyperlipoproteinemia (Metabolic)	1	APOE	0.200	4.16x10 ⁻⁰²	0.10506
Thrombophilia (Hematological)	Protein_S_deficiency (Hematological)	1	PROC*	0.200	3.33x10 ⁻⁰²	0.09004
Thrombophilia (Hematological)	Angioedema (Immunological)	1	PROC*	0.200	4.12x10 ⁻⁰²	0.10557
Tuberculosis (Respiratory)	Fibrosis (Ophthalmological)	5	IL10*,TLR2,IFNG*,NOS2A,TNF	0.294	1.16x10 ⁻⁰²	0.04270
Tuberculosis (Respiratory)	Leprosy (Immunological)	3	TLR2,IL10*,TNF	0.429	4.45x10 ⁻⁰⁵	0.00037
Tuberculosis (Respiratory)	Stroke (Cardiovascular)	3	TNF,NOS2A,TNFRSF1A	0.375	5.18x10 ⁻⁰⁴	0.00321
Tuberculosis (Respiratory)	Listeria_monocytogenes (Immunological)	3	IFNG*,NOS2A,TNFRSF1A	0.500	5.81x10 ⁻⁰⁸	0.00000
Venous_thrombosis (Cardiovascular)	Epidermolysis_bullosa (Dermatological)	2	PROC*,PROS1	0.500	5.15x10 ⁻⁰⁸	0.00000
Venous_thrombosis (Cardiovascular)	Thrombophilia (Hematological)	3	F2,PROC*,THBD	0.600	5.67x10 ⁻¹⁰	0.00000
Venous_thrombosis (Cardiovascular)	Angioedema (Immunological)	2	PROC*,PROS1	0.500	5.98x10 ⁻⁰⁸	0.00000
Venous_thrombosis (Cardiovascular)	Protein_S_deficiency (Hematological)	2	PROC*,PROS1	0.500	6.92x10 ⁻⁰⁷	0.00001

Disease 1	Disease 2	# of shared proteins	shared proteins	DOS	<i>p-value</i>	FDR
von_Willebrand_disease (Hematological)	Bleeding_disorder (Hematological)	2	VWF*,GP1BA	0.286	1.12x10 ⁻⁰³	0.00579