

Gene Symbol	Gene Name	HPRD ID	SwissProt ID	Gene ID
A2M	alpha-2-macroglobulin	72	A2MG_HUMAN	2
ABL1	c-abl oncogene 1, receptor tyrosine kinase	1809	ABL1_HUMAN	25
ADCY5	adenylate cyclase 5	8973	ADCY5_HUMAN	111
AGPAT2	1-acylglycerol-3-phosphate O-acyltransferase 2 (4373	PLCB_HUMAN	10555
AIFM1	apoptosis-inducing factor, mitochondrion-associ	2161	AIFM1_HUMAN	9131
AKT1	v-akt murine thymoma viral oncogene homolog 1	1261	AKT1_HUMAN	207
APEX1	APEX nuclease (multifunctional DNA repair enzym	136	APEX1_HUMAN	328
APOC3	apolipoprotein C-III	132	APOC3_HUMAN	345
APOE	apolipoprotein E	135	APOE_HUMAN	348
APP	amyloid beta (A4) precursor protein (peptidase r	100	A4_HUMAN	351
APTX	aprataxin	5892	APTX_HUMAN	54840
AR	androgen receptor (dihydrotestosterone recepto	2437	ANDR_HUMAN	367
ARHGAP1	Rho GTPase activating protein 1	4108	RHG01_HUMAN	392
ARNTL	aryl hydrocarbon receptor nuclear translocator-l	3973	BMAL1_HUMAN	406
ATF2	activating transcription factor 2	443	ATF2_HUMAN	1386
ATM	ataxia telangiectasia mutated	6347	ATM_HUMAN	472
ATP5O	ATP synthase, H+ transporting, mitochondrial F1	2899	ATPO_HUMAN	539
ATR	ataxia telangiectasia and Rad3 related	8369	ATR_HUMAN	545
BAX	BCL2-associated X protein	2498	BAXA_HUMAN	581
BCL2	B-cell CLL/lymphoma 2	1045	BCL2_HUMAN	596
BDNF	brain-derived neurotrophic factor	214	BDNF_HUMAN	627
BLM	Bloom syndrome	5211	BLM_HUMAN	641
BMI1	BMI1 polycomb ring finger oncogene	1277	BMI1_HUMAN	648
BRCA1	breast cancer 1, early onset	218	BRCA1_HUMAN	672
BRCA2	breast cancer 2, early onset	2554	BRCA2_HUMAN	675
BSCL2	Bernardinelli-Seip congenital lipodystrophy 2 (se	5858	BSCL2_HUMAN	26580
BUB1B	BUB1 budding uninhibited by benzimidazoles 1 h	4176	BUB1B_HUMAN	701
BUB3	BUB3 budding uninhibited by benzimidazoles 3 h	4761	BUB3_HUMAN	9184
CACNA1A	calcium channel, voltage-dependent, P/Q type, a	3004	CAC1A_HUMAN	773
CAT	catalase	282	CATA_HUMAN	847
CCNA2	cyclin A2	453	CCNA2_HUMAN	890
CDC2	cell division cycle 2, G1 to S and G2 to M	302	CDC2_HUMAN	983
CDC42	cell division cycle 42 (GTP binding protein, 25kDa	309	CDC42_HUMAN	998
CDKN2A	cyclin-dependent kinase inhibitor 2A (melanoma	2542	CD2A1_HUMAN	1029
CEBPA	CCAAT/enhancer binding protein (C/EBP), alpha	296	CEBPA_HUMAN	1050
CEBPB	CCAAT/enhancer binding protein (C/EBP), beta	1801	CEBPB_HUMAN	1051
CHEK2	CHK2 checkpoint homolog (S. pombe)	5084	CHK2_HUMAN	11200
CLOCK	clock homolog (mouse)	3508	CLOCK_HUMAN	9575
CLU	clusterin	1706	CLUS_HUMAN	1191
COQ7	coenzyme Q7 homolog, ubiquinone (yeast)	3401	COQ7_HUMAN	10229
CREB1	cAMP responsive element binding protein 1	442	CREB1_HUMAN	1385
CREBBP	CREB binding protein (Rubinstein-Taybi syndrom	2534	CBP_HUMAN	1387
CSNK1E	casein kinase 1, epsilon	2919	KC1E_HUMAN	1454
CTGF	connective tissue growth factor	412	CTGF_HUMAN	1490
CTNNB1	catenin (cadherin-associated protein), beta 1, 88	286	CTNB1_HUMAN	1499
DBN1	drebrin 1	545	DREB_HUMAN	1627
DDIT3	DNA-damage-inducible transcript 3	529	DDIT3_HUMAN	1649

DLL3	delta-like 3 (Drosophila)	4140	DLL3_HUMAN	10683
E2F1	E2F transcription factor 1	1806	E2F1_HUMAN	1869
EEF1A1	eukaryotic translation elongation factor 1 alpha	559	EF1A1_HUMAN	1915
EEF2	eukaryotic translation elongation factor 2	561	EF2_HUMAN	1938
EFEMP1	EGF-containing fibulin-like extracellular matrix p	3331	FBLN3_HUMAN	2202
EGF	epidermal growth factor (beta-urogastrone)	578	EGF_HUMAN	1950
EGFR	epidermal growth factor receptor (erythroblastic	579	EGFR_HUMAN	1956
EGR1	early growth response 1	549	EGR1_HUMAN	1958
ELN	elastin (supravalvular aortic stenosis, Williams-B	556	ELN_HUMAN	2006
EMD	emerin (Emery-Dreifuss muscular dystrophy)	2309	EMD_HUMAN	2010
EP300	E1A binding protein p300	4078	EP300_HUMAN	2033
EPOR	erythropoietin receptor	587	EPOR_HUMAN	2057
ERBB2	v-erb-b2 erythroblastic leukemia viral oncogene	1281	ERBB2_HUMAN	2064
ERCC1	excision repair cross-complementing rodent repa	125	ERCC1_HUMAN	2067
ERCC2	excision repair cross-complementing rodent repa	530	ERCC2_HUMAN	2068
ERCC3	excision repair cross-complementing rodent repa	593	ERCC3_HUMAN	2071
ERCC4	excision repair cross-complementing rodent repa	594	ERCC4_HUMAN	2072
ERCC5	excision repair cross-complementing rodent repa	595	ERCC5_HUMAN	2073
ERCC6	excision repair cross-complementing rodent repa	596	ERCC6_HUMAN	2074
ERCC8	excision repair cross-complementing rodent repa	7523	ERCC8_HUMAN	1161
ESR1	estrogen receptor 1	589	ESR1_HUMAN	2099
FAS	Fas (TNF receptor superfamily, member 6)	609	TNR6_HUMAN	355
FEN1	flap structure-specific endonuclease 1	2670	FEN1_HUMAN	2237
FGF23	fibroblast growth factor 23	5648	FGF23_HUMAN	8074
FGFR1	fibroblast growth factor receptor 1 (fms-related	634	FGFR1_HUMAN	2260
FLT1	fms-related tyrosine kinase 1 (vascular endotheli	1297	VGFR1_HUMAN	2321
FOS	v-fos FBJ murine osteosarcoma viral oncogene h	1275	FOS_HUMAN	2353
FOXM1	forkhead box M1	3823	FOXM1_HUMAN	2305
FOXO1	forkhead box O1	645	FOXO1_HUMAN	2308
FOXO3	forkhead box O3	4061	FOXO3_HUMAN	2309
FOXO4	forkhead box O4	2070	FOXO4_HUMAN	4303
FRAP1	FK506 binding protein 12-rapamycin associated p	3134	FRAP_HUMAN	2475
GCLC	glutamate-cysteine ligase, catalytic subunit	6032	GSH1_HUMAN	2729
GCLM	glutamate-cysteine ligase, modifier subunit	3106	GSH0_HUMAN	2730
GH1	growth hormone 1	751	SOMA_HUMAN	2688
GHR	growth hormone receptor	2971	GHR_HUMAN	2690
GHRH	growth hormone releasing hormone	11752	SLIB_HUMAN	2691
GHRHR	growth hormone releasing hormone receptor	748	GHRHR_HUMAN	2692
GPX1	glutathione peroxidase 1	11749	GPX1_HUMAN	2876
GPX4	glutathione peroxidase 4 (phospholipid hydroper	11819	GPX4_HUMAN	2879
GRB2	growth factor receptor-bound protein 2	150	GRB2_HUMAN	2885
GSK3B	glycogen synthase kinase 3 beta	5418	GSK3B_HUMAN	2932
GSR	glutathione reductase	704	GSHR_HUMAN	2936
GSS	glutathione synthetase	3000	GSHB_HUMAN	2937
GSTA4	glutathione S-transferase A4	6899	GSTA4_HUMAN	2941
GSTP1	glutathione S-transferase pi 1	614	GSTP1_HUMAN	2950
GTF2H2	general transcription factor IIH, polypeptide 2, 4	3450	TF2H2_HUMAN	2966
H2AFX	H2A histone family, member X	3465	H2AX_HUMAN	3014

HBP1	HMG-box transcription factor 1	1602	HBP1_HUMAN	26959
HDAC1	histone deacetylase 1	3143	HDAC1_HUMAN	3065
HDAC2	histone deacetylase 2	5521	HDAC2_HUMAN	3066
HDAC3	histone deacetylase 3	8950	HDAC3_HUMAN	8841
HELLS	helicase, lymphoid-specific	7232	HELLS_HUMAN	3070
HESX1	HESX homeobox 1	3482	HESX1_HUMAN	8820
HIC1	hypermethylated in cancer 1	4826	HIC1_HUMAN	3090
HIF1A	hypoxia-inducible factor 1, alpha subunit (basic h	4517	HIF1A_HUMAN	3091
HMGB1	high-mobility group box 1	1228	HMGB1_HUMAN	3146
HMGB2	high-mobility group box 2	1229	HMGB2_HUMAN	3148
HOXB7	homeobox B7	850	HXB7_HUMAN	3217
HOXC4	homeobox C4	860	HXC4_HUMAN	3221
HRAS	v-Ha-ras Harvey rat sarcoma viral oncogene hom	1813	RASH_HUMAN	3265
HSF1	heat shock transcription factor 1	778	HSF1_HUMAN	3297
HSP90AA1	heat shock protein 90kDa alpha (cytosolic), class	777	HS90A_HUMAN	3320
HSPA1A	heat shock 70kDa protein 1A	774	HSP71_HUMAN	3303
HSPA1B	heat shock 70kDa protein 1B	6784	HSP71_HUMAN	3304
HSPA8	heat shock 70kDa protein 8	7205	HSP7C_HUMAN	3312
HSPA9	heat shock 70kDa protein 9 (mortalin)	2770	GRP75_HUMAN	3313
HSPD1	heat shock 60kDa protein 1 (chaperonin)	318	CH60_HUMAN	3329
HTT	huntingtin	883	HD_HUMAN	3064
IGF1	insulin-like growth factor 1 (somatomedin C)	936	IGF1A_HUMAN	3479
IGF1R	insulin-like growth factor 1 receptor	932	IGF1R_HUMAN	3480
IGF2	insulin-like growth factor 2 (somatomedin A)	939	IGF2_HUMAN	3481
IGFBP3	insulin-like growth factor binding protein 3	899	IBP3_HUMAN	3486
IL2	interleukin 2	979	IL2_HUMAN	3558
IL2RG	interleukin 2 receptor, gamma (severe combined	2391	IL2RG_HUMAN	3561
IL6	interleukin 6 (interferon, beta 2)	970	IL6_HUMAN	3569
IL7	interleukin 7	892	IL7_HUMAN	3574
IL7R	interleukin 7 receptor	893	IL7RA_HUMAN	3575
INS	insulin	1455	INS_HUMAN	3630
INSR	insulin receptor	975	INSR_HUMAN	3643
IRS1	insulin receptor substrate 1	943	IRS1_HUMAN	3667
IRS2	insulin receptor substrate 2	2878	IRS2_HUMAN	8660
JAK2	Janus kinase 2 (a protein tyrosine kinase)	993	JAK2_HUMAN	3717
JUN	jun oncogene	1302	JUN_HUMAN	3725
JUND	jun D proto-oncogene	1304	JUND_HUMAN	3727
KL	klotho	5316	KLOT_HUMAN	9365
LEP	leptin	1249	LEP_HUMAN	3952
LEPR	leptin receptor	3001	LEPR_HUMAN	3953
LMNA	lamin A/C	1035	LMNA_HUMAN	4000
LMNB1	lamin B1	1036	LMNB1_HUMAN	4001
LRP2	low density lipoprotein-related protein 2	2509	LRP2_HUMAN	4036
MAP3K5	mitogen-activated protein kinase kinase kinase 5	3904	M3K5_HUMAN	4217
MAPK14	mitogen-activated protein kinase 14	2619	MK14_HUMAN	1432
MAPK3	mitogen-activated protein kinase 3	3479	MK03_HUMAN	5595
MAPK8	mitogen-activated protein kinase 8	3100	MK08_HUMAN	5599
MAPK9	mitogen-activated protein kinase 9	4206	MK09_HUMAN	5601

MAPT	microtubule-associated protein tau	1142	TAU_HUMAN	4137
MAX	MYC associated factor X	1113	MAX_HUMAN	4149
MDM2	Mdm2 p53 binding protein homolog (mouse)	1272	MDM2_HUMAN	4193
MED1	mediator complex subunit 1	5055	MED1_HUMAN	5469
MLH1	mutL homolog 1, colon cancer, nonpolyposis typ	390	MLH1_HUMAN	4292
MSRA	methionine sulfoxide reductase A	3152	MSRA_HUMAN	4482
MT-CO1	mitochondrially encoded cytochrome c oxidase I	2469	COX1_HUMAN	4512
MXD1	MAX dimerization protein 1	2487	MAD1_HUMAN	4084
MXI1	MAX interactor 1	2486	MXI1_HUMAN	4601
MYC	v-myc myelocytomatosis viral oncogene homolog	1818	MYC_HUMAN	4609
NBN	nibrin	4050	NBN_HUMAN	4683
NCOR1	nuclear receptor co-repressor 1	2911	NCOR1_HUMAN	9611
NFKB1	nuclear factor of kappa light polypeptide gene en	1238	NFKB1_HUMAN	4790
NFKB2	nuclear factor of kappa light polypeptide gene en	1239	NFKB2_HUMAN	4791
NFKBIA	nuclear factor of kappa light polypeptide gene en	1235	IKBA_HUMAN	4792
NGF	nerve growth factor (beta polypeptide)	8874	NGF_HUMAN	4803
NGFR	nerve growth factor receptor (TNFR superfamily,	1197	TNR16_HUMAN	4804
NOG	noggin	4291	NOGG_HUMAN	9241
NR3C1	nuclear receptor subfamily 3, group C, member 1	679	GCR_HUMAN	2908
NRG1	neuregulin 1	802	NRG1_HUMAN	3084
PAPPA	pregnancy-associated plasma protein A, pappaly	1448	PAPP1_HUMAN	5069
PARP1	poly (ADP-ribose) polymerase family, member 1	1435	PARP1_HUMAN	142
PCK1	phosphoenolpyruvate carboxykinase 1 (soluble)	2028	PPCKC_HUMAN	5105
PCMT1	protein-L-isoaspartate (D-aspartate) O-methyltra	8908	PIMT_HUMAN	5110
PCNA	proliferating cell nuclear antigen	1456	PCNA_HUMAN	5111
PDGFB	platelet-derived growth factor beta polypeptide	1815	PDGFB_HUMAN	5155
PDGFRB	platelet-derived growth factor receptor, beta po	1423	PGFRB_HUMAN	5159
PDPK1	3-phosphoinositide dependent protein kinase-1	5556	PDPK1_HUMAN	5170
PEX5	peroxisomal biogenesis factor 5	2684	PEX5_HUMAN	5830
PIK3CB	phosphoinositide-3-kinase, catalytic, beta polype	4234	PK3CB_HUMAN	5291
PIK3R1	phosphoinositide-3-kinase, regulatory subunit 1	1381	P85A_HUMAN	5295
PIN1	peptidylprolyl cis/trans isomerase, NIMA-interac	3031	PIN1_HUMAN	5300
PLAU	plasminogen activator, urokinase	1883	UROK_HUMAN	5328
PLCG2	phospholipase C, gamma 2 (phosphatidylinositol	2570	PLCG2_HUMAN	5336
PMCH	pro-melanin-concentrating hormone	1459	MCH_HUMAN	5367
PML	promyelocytic leukemia	23	PML_HUMAN	5371
POLA1	polymerase (DNA directed), alpha 1	2416	DPOLA_HUMAN	5422
POLB	polymerase (DNA directed), beta	7517	DPOLB_HUMAN	5423
POLD1	polymerase (DNA directed), delta 1, catalytic sub	8882	DPOD1_HUMAN	5424
POLG	polymerase (DNA directed), gamma	1438	DPOG1_HUMAN	5428
PON1	paraoxonase 1	1351	PON1_HUMAN	5444
POU1F1	POU class 1 homeobox 1	1409	PIT1_HUMAN	5449
PPARA	peroxisome proliferator-activated receptor alpha	1369	PPARA_HUMAN	5465
PPARGC1A	peroxisome proliferator-activated receptor gamma	5155	PRGC1_HUMAN	10891
PPM1D	protein phosphatase 1D magnesium-dependent,	5482	PPM1D_HUMAN	8493
PPP1CA	protein phosphatase 1, catalytic subunit, alpha is	15942	PP1A_HUMAN	5499
PRDX1	peroxiredoxin 1	1458	PRDX1_HUMAN	5052
PRKCA	protein kinase C, alpha	1498	KPCA_HUMAN	5578

PRKCD	protein kinase C, delta	1501	KPCD_HUMAN	5580
PRKDC	protein kinase, DNA-activated, catalytic polypept	2941	PRKDC_HUMAN	5591
PROP1	PROP paired-like homeobox 1	3325	PROP1_HUMAN	5626
PSEN1	presenilin 1 (Alzheimer disease 3)	87	PSN1_HUMAN	5663
PTEN	phosphatase and tensin homolog (mutated in m	3431	PTEN_HUMAN	5728
PTGS2	prostaglandin-endoperoxide synthase 2 (prostag	2599	PGH2_HUMAN	5743
PTK2	PTK2 protein tyrosine kinase 2	2859	FAK1_HUMAN	5747
PTK2B	PTK2B protein tyrosine kinase 2 beta	3131	FAK2_HUMAN	2185
PTPN1	protein tyrosine phosphatase, non-receptor type	1477	PTN1_HUMAN	5770
PTPN11	protein tyrosine phosphatase, non-receptor type	1470	PTN11_HUMAN	5781
RAD51	RAD51 homolog (RecA homolog, E. coli) (S. cerev	1557	RAD51_HUMAN	5888
RAD52	RAD52 homolog (S. cerevisiae)	11855	RAD52_HUMAN	5893
RAE1	RAE1 RNA export 1 homolog (S. pombe)	11939	RAE1L_HUMAN	8480
RB1	retinoblastoma 1 (including osteosarcoma)	1574	RB_HUMAN	5925
RECQL4	RecQ protein-like 4	4805	RECQ4_HUMAN	9401
RELA	v-rel reticuloendotheliosis viral oncogene homol	1241	TF65_HUMAN	5970
RET	ret proto-oncogene	1266	RET_HUMAN	5979
RFC4	replication factor C (activator 1) 4, 37kDa	22	RFC4_HUMAN	5984
RGN	regucalcin (senescence marker protein-30)	2196	RGN_HUMAN	9104
RPA1	replication protein A1, 70kDa	1565	RFA1_HUMAN	6117
S100B	S100 calcium binding protein B	1505	S100B_HUMAN	6285
SDHC	succinate dehydrogenase complex, subunit C, int	3878	C560_HUMAN	6391
SHC1	SHC (Src homology 2 domain containing) transfo	2780	SHC1_HUMAN	6464
SIN3A	SIN3 homolog A, transcription regulator (yeast)	9690	SIN3A_HUMAN	25942
SIRT1	sirtuin (silent mating type information regulatio	8381	SIRT1_HUMAN	23411
SIRT6	sirtuin (silent mating type information regulatio	12093	SIRT6_HUMAN	51548
SNCG	synuclein, gamma (breast cancer-specific protei	4297	SYUG_HUMAN	6623
SOD1	superoxide dismutase 1, soluble (amyotrophic la	937	SODC_HUMAN	6647
SOD2	superoxide dismutase 2, mitochondrial	938	SODM_HUMAN	6648
SP1	Sp1 transcription factor	1796	SP1_HUMAN	6667
SST	somatostatin	8920	SMS_HUMAN	6750
SSTR3	somatostatin receptor 3	1675	SSR3_HUMAN	6753
STAT3	signal transducer and activator of transcription 3	26	STAT3_HUMAN	6774
STAT5A	signal transducer and activator of transcription 5	3301	STA5A_HUMAN	6776
STAT5B	signal transducer and activator of transcription 5	5037	STA5B_HUMAN	6777
STK11	serine/threonine kinase 11	3740	STK11_HUMAN	6794
STUB1	STIP1 homology and U-box containing protein 1	6232	STUB1_HUMAN	10273
SUMO1	SMT3 suppressor of mif two 3 homolog 1 (S. cere	3554	SUMO1_HUMAN	7341
TAF1	TAF1 RNA polymerase II, TATA box binding prote	2436	TAF1_HUMAN	6872
TBP	TATA box binding protein	2511	TBP_HUMAN	6908
TCF3	transcription factor 3 (E2A immunoglobulin enha	918	TFE2_HUMAN	6929
TERC	telomerase RNA component			7012
TERF1	telomeric repeat binding factor (NIMA-interactin	2975	TERF1_HUMAN	7013
TERF2	telomeric repeat binding factor 2	3610	TERF2_HUMAN	7014
TERT	telomerase reverse transcriptase	1754	TERT_HUMAN	7015
TFAP2A	transcription factor AP-2 alpha (activating enhan	128	AP2A_HUMAN	7020
TFDP1	transcription factor Dp-1	1792	TFDP1_HUMAN	7027
TGFB1	transforming growth factor, beta 1	1821	TGFB1_HUMAN	7040

TNF	tumor necrosis factor (TNF superfamily, member	1855	TNFA_HUMAN	7124
TOP1	topoisomerase (DNA) I	535	TOP1_HUMAN	7150
TOP2A	topoisomerase (DNA) II alpha 170kDa	536	TOP2A_HUMAN	7153
TOP2B	topoisomerase (DNA) II beta 180kDa	537	TOP2B_HUMAN	7155
TOP3B	topoisomerase (DNA) III beta	4662	TOP3B_HUMAN	8940
TP53	tumor protein p53	1859	P53_HUMAN	7157
TP63	tumor protein p63	4469	P63_HUMAN	8626
TXN	thioredoxin	1761	THIO_HUMAN	7295
UBB	ubiquitin B	6771	UBIQ_HUMAN	7314
UBE2I	ubiquitin-conjugating enzyme E2I (UBC9 homolo	9045	UBC9_HUMAN	7329
UCHL1	ubiquitin carboxyl-terminal esterase L1 (ubiquitin	1877	UCHL1_HUMAN	7345
UCP1	uncoupling protein 1 (mitochondrial, proton carr	221	UCP1_HUMAN	7350
UCP2	uncoupling protein 2 (mitochondrial, proton carr	3410	UCP2_HUMAN	7351
UCP3	uncoupling protein 3 (mitochondrial, proton carr	3623	UCP3_HUMAN	7352
VCP	valosin-containing protein	3013	TERA_HUMAN	7415
VEGFA	vascular endothelial growth factor A	1889	VEGFA_HUMAN	7422
WRN	Werner syndrome	5212	WRN_HUMAN	7486
XPA	xeroderma pigmentosum, complementation gro	2045	XPA_HUMAN	7507
XRCC5	X-ray repair complementing defective repair in C	8935	KU86_HUMAN	7520
XRCC6	X-ray repair complementing defective repair in C	1071	KU70_HUMAN	2547
YWHAZ	tyrosine 3-monooxygenase/tryptophan 5-monoc	3183	1433Z_HUMAN	7534
ZMPSTE24	zinc metallopeptidase (STE24 homolog, <i>S. cerevis</i>	7349	FACE1_HUMAN	10269