Supplementary Table S5- Gene-OMIM associations for genes in the Core and NS4B extended PPI networks

Core protein extended PPI network

Gene ID	Symbol	OMIM ID	OMIM Description
10060	ABCC9	608569	CARDIOMYOPATHY, DILATED, 1O; CMD1O
10381	TUBB3	600638	FIBROSIS OF EXTRAOCULAR MUSCLES, CONGENITAL, 3A, WITH OR WITHOUT EXTRAOCULAR INVOLVEMENT; CFEOM3A
10397	NDRG1	601455	CHARCOT-MARIE-TOOTH DISEASE, TYPE 4D; CMT4D
1053	CEBPE	245480	SPECIFIC GRANULE DEFICIENCY; SGD
11178	LZTS1	133239	ESOPHAGEAL CANCER
1200	TPP1	204500	CEROID LIPOFUSCINOSIS, NEURONAL, 2; CLN2
1356	CP	604290	ACERULOPLASMINEMIA
1583	CYP11A1	201710	LIPOID CONGENITAL ADRENAL HYPERPLASIA
1588	CYP19A1	139300	AROMATASE EXCESS SYNDROME; AEXS
1736	DKC1	300240	HOYERAAL-HREIDARSSON SYNDROME; HHS
1736	DKC1	305000	DYSKERATOSIS CONGENITA, X-LINKED; DKC
1956	EGFR	211980	LUNG CANCER
1991	ELANE	162800	CYCLIC HEMATOPOIESIS
1991	ELANE	202700	NEUTROPENIA, SEVERE CONGENITAL, AUTOSOMAL DOMINANT 1; SCN1
2	A2M	104300	ALZHEIMER DISEASE; AD
2035	EPB41	611804	ELLIPTOCYTOSIS 1; EL1
2108	ETFA	231680	MULTIPLE ACYL-CoA DEHYDROGENASE DEFICIENCY; MADD
2109	ETFB	231680	MULTIPLE ACYL-CoA DEHYDROGENASE DEFICIENCY; MADD
2175	FANCA	227650	FANCONI ANEMIA; FA
2512	FTL	600886	HYPERFERRITINEMIA-CATARACT SYNDROME
2512	FTL	606159	NEURODEGENERATION WITH BRAIN IRON ACCUMULATION 3; NBIA3
2629	GBA	230800	GAUCHER DISEASE, TYPE I
2629	GBA	230900	GAUCHER DISEASE, TYPE II
2629	GBA	231000	GAUCHER DISEASE, TYPE III
2629	GBA	231005	GAUCHER DISEASE, TYPE IIIC
2629	GBA	608013	GAUCHER DISEASE, PERINATAL LETHAL

2720	GLB1	230500	GM1-GANGLIOSIDOSIS, TYPE I
2720	GLB1	230600	GM1-GANGLIOSIDOSIS, TYPE II
2720	GLB1	230650	GM1-GANGLIOSIDOSIS, TYPE III
2720	GLB1	253010	MORQUIO SYNDROME B
2990	GUSB	253220	MUCOPOLYSACCHARIDOSIS TYPE VII
3106	HLA-B	106300	SPONDYLOARTHROPATHY, SUSCEPTIBILITY TO, 1; SPDA1
3106	HLA-B	608579	SEVERE CUTANEOUS ADVERSE REACTION, SUSCEPTIBILITY TO
3329	HSPD1	605280	SPASTIC PARAPLEGIA 13, AUTOSOMAL DOMINANT; SPG13
3329	HSPD1	612233	LEUKODYSTROPHY, HYPOMYELINATING, 4
335	APOA1	105200	AMYLOIDOSIS, FAMILIAL VISCERAL
335	APOA1	604091	HYPOALPHALIPOPROTEINEMIA, PRIMARY
34	ACADM	201450	ACYL-CoA DEHYDROGENASE, MEDIUM-CHAIN, DEFICIENCY OF
3827	KNG1	228960	HIGH MOLECULAR WEIGHT KININOGEN DEFICIENCY
4093	SMAD9	178600	PULMONARY HYPERTENSION, PRIMARY, 1; PPH1
412	STS	308100	ICHTHYOSIS, X-LINKED; XLI
4128	MAOA	300615	BRUNNER SYNDROME
4353	MPO	104300	ALZHEIMER DISEASE; AD
4353	MPO	254600	MYELOPEROXIDASE DEFICIENCY
4609	MYC	113970	BURKITT LYMPHOMA; BL
4720	NDUFS2	252010	MITOCHONDRIAL COMPLEX I DEFICIENCY
4722	NDUFS3	256000	LEIGH SYNDROME; LS
4729	NDUFV2	168600	PARKINSON DISEASE; PD
4792	NFKBIA	612132	ECTODERMAL DYSPLASIA, ANHIDROTIC, WITH T-CELL IMMUNODEFICIENCY, AUTOSOMAL DOMINANT
5009	OTC	311250	ORNITHINE TRANSCARBAMYLASE DEFICIENCY, HYPERAMMONEMIA DUE TO
5071	PARK2	211980	LUNG CANCER
5071	PARK2	600116	PARKINSON DISEASE 2, AUTOSOMAL RECESSIVE JUVENILE; PARK2
5071	PARK2	604370	BREAST-OVARIAN CANCER, FAMILIAL, SUSCEPTIBILITY TO, 1; BROVCA1
5071	PARK2	607572	LEPROSY, SUSCEPTIBILITY TO, 2; LPRS2
5245	PHB	114480	BREAST CANCER

5265	SERPINA1	606963	PULMONARY DISEASE, CHRONIC OBSTRUCTIVE
5340	PLG	217090	PLASMINOGEN DEFICIENCY, TYPE I
55755	CDK5RAP2	604804	MICROCEPHALY, PRIMARY AUTOSOMAL RECESSIVE, 3; MCPH3
60	ACTB	607371	DYSTONIA, JUVENILE-ONSET
6303	SAT1	308800	KERATOSIS FOLLICULARIS SPINULOSA DECALVANS, X-LINKED; KFSDX
6310	ATXN1	164400	SPINOCEREBELLAR ATAXIA 1; SCA1
6399	TRAPPC2	313400	SPONDYLOEPIPHYSEAL DYSPLASIA TARDA, X-LINKED; SEDT
7132	TNFRSF1A	142680	PERIODIC FEVER, FAMILIAL, AUTOSOMAL DOMINANT
7350	UCP1	601665	OBESITY
7414	VCL	611407	CARDIOMYOPATHY, DILATED, 1W; CMD1W
7414	VCL	613255	CARDIOMYOPATHY, FAMILIAL HYPERTROPHIC, 15; CMH15
7428	VHL	144700	RENAL CELL CARCINOMA, NONPAPILLARY; RCC
7428	VHL	171300	PHEOCHROMOCYTOMA
7428	VHL	193300	VON HIPPEL-LINDAU SYNDROME; VHL
7428	VHL	263400	ERYTHROCYTOSIS, FAMILIAL, 2
78987	CRELD1	606217	ATRIOVENTRICULAR SEPTAL DEFECT, SUSCEPTIBILITY TO, 2; AVSD2
79577	CDC73	145000	HYPERPARATHYROIDISM 1; HRPT1
79577	CDC73	145001	HYPERPARATHYROIDISM 2; HRPT2
79577	CDC73	608266	PARATHYROID CARCINOMA
8517	IKBKG	300291	ECTODERMAL DYSPLASIA, HYPOHIDROTIC, WITH IMMUNE DEFICIENCY
8517	IKBKG	300301	ECTODERMAL DYSPLASIA, ANHIDROTIC, WITH IMMUNODEFICIENCY, OSTEOPETROSIS, AND LYMPHEDEMA; OLEDAID
8517	IKBKG	300584	IMMUNODEFICIENCY WITHOUT ANHIDROTIC ECTODERMAL DYSPLASIA
8517	IKBKG	300636	ATYPICAL MYCOBACTERIOSIS, FAMILIAL, X-LINKED 1; AMCBX1
8517	IKBKG	300640	INVASIVE PNEUMOCOCCAL DISEASE, RECURRENT ISOLATED, 2; IPD2
8517	IKBKG	308300	INCONTINENTIA PIGMENTI; IP
950	SCARB2	254900	ACTION MYOCLONUS-RENAL FAILURE SYNDROME; AMRF

NS4B protein extended PPI network

Gene ID	Symbol	OMIM ID	OMIM Description
10682	EBP	302960	CHONDRODYSPLASIA PUNCTATA 2, X-LINKED DOMINANT; CDPX2
1080	CFTR	167800	PANCREATITIS, HEREDITARY; PCTT
1080	CFTR	219700	CYSTIC FIBROSIS; CF
1080	CFTR	277180	VAS DEFERENS, CONGENITAL BILATERAL APLASIA OF; CBAVD
10999	SLC27A4	608649	ICHTHYOSIS PREMATURITY SYNDROME; IPS
1356	CP	604290	ACERULOPLASMINEMIA
1528	CYB5A	250790	METHEMOGLOBINEMIA TYPE IV
1785	DNM2	160150	MYOPATHY, CENTRONUCLEAR, AUTOSOMAL DOMINANT
1785	DNM2	606482	CHARCOT-MARIE-TOOTH DISEASE, DOMINANT INTERMEDIATE B; CMTDIB
19	ABCA1	143890	HYPERCHOLESTEROLEMIA, AUTOSOMAL DOMINANT
19	ABCA1	205400	TANGIER DISEASE; TGD
19	ABCA1	604091	HYPOALPHALIPOPROTEINEMIA, PRIMARY
1956	EGFR	211980	LUNG CANCER
1991	ELANE	162800	CYCLIC HEMATOPOIESIS
1991	ELANE	202700	NEUTROPENIA, SEVERE CONGENITAL, AUTOSOMAL DOMINANT 1; SCN1
2064	ERBB2	137215	GASTRIC CANCER
2064	ERBB2	137800	GLIOMA SUSCEPTIBILITY 1; GLM1
2064	ERBB2	211980	LUNG CANCER
2065	ERBB3	607598	LETHAL CONGENITAL CONTRACTURE SYNDROME 2; LCCS2
213	ALB	194470	ZINC, ELEVATED PLASMA
2153	F5	188055	THROMBOPHILIA DUE TO ACTIVATED PROTEIN C RESISTANCE
2153	F5	227400	FACTOR V DEFICIENCY
2153	F5	600880	BUDD-CHIARI SYNDROME
2153	F5	601367	STROKE, ISCHEMIC
2160	F11	612416	FACTOR XI DEFICIENCY
2243	FGA	105200	AMYLOIDOSIS, FAMILIAL VISCERAL
2243	FGA	202400	AFIBRINOGENEMIA, CONGENITAL
2244	FGB	202400	AFIBRINOGENEMIA, CONGENITAL
22861	NLRP1	606579	VITILIGO-ASSOCIATED MULTIPLE AUTOIMMUNE DISEASE SUSCEPTIBILITY 1; VAMAS1

24140	FTSJ1	309549	MENTAL RETARDATION, X-LINKED 9; MRX9
2731	GLDC	605899	GLYCINE ENCEPHALOPATHY; GCE
2771	GNAI2	192605	VENTRICULAR TACHYCARDIA, FAMILIAL
2811	GP1BA	153670	BERNARD-SOULIER SYNDROME, AUTOSOMAL DOMINANT
2811	GP1BA	177820	PSEUDO-VON WILLEBRAND DISEASE
2811	GP1BA	231200	BERNARD-SOULIER SYNDROME; BSS
2811	GP1BA	258660	NONARTERITIC ANTERIOR ISCHEMIC OPTIC NEUROPATHY, SUSCEPTIBILITY TO
30061	SLC40A1	606069	HEMOCHROMATOSIS, TYPE 4; HFE4
3053	SERPIND1	612356	HEPARIN COFACTOR II DEFICIENCY
3106	HLA-B	106300	SPONDYLOARTHROPATHY, SUSCEPTIBILITY TO, 1; SPDA1
3106	HLA-B	608579	SEVERE CUTANEOUS ADVERSE REACTION, SUSCEPTIBILITY TO
335	APOA1	105200	AMYLOIDOSIS, FAMILIAL VISCERAL
335	APOA1	604091	HYPOALPHALIPOPROTEINEMIA, PRIMARY
338	APOB	144010	HYPERCHOLESTEROLEMIA, AUTOSOMAL DOMINANT, TYPE B
351	APP	104300	ALZHEIMER DISEASE; AD
351	APP	605714	CEREBRAL AMYLOID ANGIOPATHY, APP-RELATED
3674	ITGA2B	273800	THROMBASTHENIA OF GLANZMANN AND NAEGELI
3732	CD82	176807	PROSTATE CANCER
3815	KIT	172800	PIEBALD TRAIT; PBT
3815	KIT	273300	TESTICULAR TUMORS
3815	KIT	601626	LEUKEMIA, ACUTE MYELOID; AML
3815	KIT	606764	GASTROINTESTINAL STROMAL TUMOR; GIST
3857	KRT9	144200	PALMOPLANTAR KERATODERMA, EPIDERMOLYTIC; EPPK
3868	KRT16	144200	PALMOPLANTAR KERATODERMA, EPIDERMOLYTIC; EPPK
3868	KRT16	167200	PACHYONYCHIA CONGENITA, TYPE 1; PC1
3868	KRT16	600962	PALMOPLANTAR KERATODERMA, NONEPIDERMOLYTIC; NEPPK
3868	KRT16	613000	PALMOPLANTAR KERATODERMA, NONEPIDERMOLYTIC, FOCAL; FNEPPK
3931	LCAT	136120	FISH-EYE DISEASE; FED
3931	LCAT	245900	LECITHIN:CHOLESTEROL ACYLTRANSFERASE DEFICIENCY

3990	LIPC	125853	DIABETES MELLITUS, NONINSULIN-DEPENDENT; NIDDM
3990	LIPC	612797	HIGH DENSITY LIPOPROTEIN CHOLESTEROL LEVEL QUANTITATIVE TRAIT LOCUS 12; HDLCQ12
4179	CD46	235400	HEMOLYTIC UREMIC SYNDROME, ATYPICAL, SUSCEPTIBILITY TO, 1; AHUS1
4179	CD46	612922	HEMOLYTIC UREMIC SYNDROME, ATYPICAL, SUSCEPTIBILITY TO, 2; AHUS2
4547	MTTP	200100	ABETALIPOPROTEINEMIA; ABL
4547	MTTP	605552	ABDOMINAL OBESITY-METABOLIC SYNDROME
462	SERPINC1	613118	ANTITHROMBIN III DEFICIENCY
5054	SERPINE1	613329	PLASMINOGEN ACTIVATOR INHIBITOR-1 DEFICIENCY
5265	SERPINA1	606963	PULMONARY DISEASE, CHRONIC OBSTRUCTIVE
5327	PLAT	612348	THROMBOPHILIA, FAMILIAL, DUE TO DECREASED RELEASE OF TISSUE PLASMINOGEN ACTIVATOR
54205	CYCS	612004	THROMBOCYTOPENIA 4; THC4
5447	POR	201750	POR DEFICIENCY
54658	UGT1A1	143500	GILBERT SYNDROME
54658	UGT1A1	218800	CRIGLER-NAJJAR SYNDROME
54658	UGT1A1	237900	HYPERBILIRUBINEMIA, TRANSIENT FAMILIAL NEONATAL
54658	UGT1A1	606785	CRIGLER-NAJJAR SYNDROME, TYPE II
5479	PPIB	259440	OSTEOGENESIS IMPERFECTA, TYPE IX
57817	HAMP	602390	HEMOCHROMATOSIS, TYPE 2A; HFE2A
57817	HAMP	613313	HEMOCHROMATOSIS, TYPE 2B; HFE2B
5860	QDPR	261630	HYPERPHENYLALANINEMIA, BH4-DEFICIENT, C; HPABH4C
64221	ROBO3	607313	GAZE PALSY, FAMILIAL HORIZONTAL, WITH PROGRESSIVE SCOLIOSIS; HGPPS
672	BRCA1	604370	BREAST-OVARIAN CANCER, FAMILIAL, SUSCEPTIBILITY TO, 1; BROVCA1
6775	STAT4	152700	SYSTEMIC LUPUS ERYTHEMATOSUS; SLE
6775	STAT4	180300	RHEUMATOID ARTHRITIS; RA
6775	STAT4	612253	SYSTEMIC LUPUS ERYTHEMATOSUS, SUSCEPTIBILITY TO, 11; SLEB11

7018	TF	209300	ATRANSFERRINEMIA
7056	THBD	612926	HEMOLYTIC UREMIC SYNDROME, ATYPICAL, SUSCEPTIBILITY TO, 6; AHUS6
710	SERPING 1	106100	ANGIOEDEMA, HEREDITARY; HAE
710	SERPING 1	120790	COMPLEMENT COMPONENT 4, PARTIAL DEFICIENCY OF
7248	TSC1	191100	TUBEROUS SCLEROSIS 1; TSC1
7248	TSC1	606690	LYMPHANGIOLEIOMYOMATOSIS; LAM
7248	TSC1	607341	FOCAL CORTICAL DYSPLASIA OF TAYLOR; FCDT
7276	TTR	105210	AMYLOIDOSIS, HEREDITARY, TRANSTHYRETIN-RELATED
7276	TTR	115430	CARPAL TUNNEL SYNDROME; CTS1
7276	TTR	145680	DYSTRANSTHYRETINEMIC EUTHYROIDAL HYPERTHYROXINEMIA
7428	VHL	144700	RENAL CELL CARCINOMA, NONPAPILLARY; RCC
7428	VHL	171300	PHEOCHROMOCYTOMA
7428	VHL	193300	VON HIPPEL-LINDAU SYNDROME; VHL
7428	VHL	263400	ERYTHROCYTOSIS, FAMILIAL, 2
799	CALCR	166710	OSTEOPOROSIS
81839	VANGL1	182940	NEURAL TUBE DEFECTS
81839	VANGL1	600145	SACRAL DEFECT WITH ANTERIOR MENINGOCELE
8518	IKBKAP	223900	NEUROPATHY, HEREDITARY SENSORY AND AUTONOMIC, TYPE III; HSAN3
8542	APOL1	181500	SCHIZOPHRENIA; SCZD
959	CD40LG	308230	IMMUNODEFICIENCY WITH HYPER-IgM, TYPE 1; HIGM1
977	CD151	179620	RAPH BLOOD GROUP SYSTEM
977	CD151	609057	NEPHROPATHY WITH PRETIBIAL EPIDERMOLYSIS BULLOSA AND DEAFNESS