GeneID	Symbol	Description	Molecular function	Biological process	KEGG pathway	Cytoplasm	Plasma membrane	Mitochondria	Mitochondria matrix	Mitochondria inner membrane	Mitochondria outer membrane	Endoplasmic reticulum	Golgi	Endosome	Ribosome assoc.	Nucleus
596	BCL2	B-cell CLL/lymphoma 2	Signaling molecule	Response to hypoxia;release of cytochrome c from mitochondria;anti-apoptosis;humoral immune response;female pregnancy;response to nutrient;positive regulation of cell proliferation;response to radiation;response to heat;response to toxin;response to inorganic substance;response to iron ion;response to caffeine;hair follicle morphogenesis;negative regulation of cellular pH reduction;response to nicotine;regulation of apoptosis;response to peptide hormone stimulus;pigmentation;regulation of protein homodimerization activity;regulation of protein heterodimerization activity;negative regulation of neuron apoptosis;response to estrogen stimulus;regulation of viral genome replication;response to ethanol;regulation of mitochondrial membrane permeability;neuron apoptosis;defense response to virus;regulation of mitochondrial membrane potential;negative regulation of mitochondrial depolarization;Inhibition of apoptosis;Oncogenesis	PATH: hsa01510 Neurodegenerative Diseases PATH: hsa04210 Apoptosis PATH: hsa04510 Focal adhesion PATH: hsa05030 Amyotrophic lateral sclerosis (ALS) PATH: hsa05060 Prion disease PATH: hsa05210 Colorectal cancer PATH: hsa05215 Prostate cancer PATH: hsa05222 Small cell lung cancer	1		1			1	1				1
598	BCL2L1	BCL2-like 1	Signaling molecule	Release of cytochrome c from mitochondria;anti-apoptosis;negative regulation of survival gene product activity;regulation of apoptosis;regulation of mitochondrial membrane permeability;regulation of mitochondrial membrane potential;Induction of apoptosis;Inhibition of apoptosis;Oncogene	PATH: hsa01510 Neurodegenerative Diseases PATH: hsa04210 Apoptosis PATH: hsa04630 Jak-STAT signaling pathway PATH: hsa05030 Amyotrophic lateral sclerosis (ALS) PATH: hsa05212 Pancreatic cancer PATH: hsa05220 Chronic myeloid leukemia PATH: hsa05222 Small cell lung cancer	1		1			1					1
79686	C14orf139	chromosome 14 open reading frame 139	Molecular function unclassified	Biological process unclassified		unknown										
79036	C19orf50	chromosome 19 open reading frame 50	Molecular function unclassified	Biological process unclassified		unknown										
10241	CALCOCO2	calcium binding and coiled-coil domain 2	Molecular function unclassified	Viral reproduction		1							1			1
2224	FDPS	farnesyl diphosphate synthase (farnesyl pyrophosphate synthetase, dimethylallyltranstransferase, geranyltranstransferase)	Synthetase;Acyltransferase	Cholesterol biosynthetic process;isoprenoid biosynthetic process;Cholesterol metabolism;Other metabolism	PATH: hsa00100 Biosynthesis of steroids PATH: hsa00900 Terpenoid biosynthesis	1										
54874	FNBP1L	formin binding protein 1-like	Other signaling molecule;Cytoskeletal protein;Other miscellaneous function protein	Endocytosis		1	1									
11337	GABARAP	GABA(A) receptor-associated protein	Non-motor microtubule binding protein	Microtubule cytoskeleton organization and biogenesis;protein targeting;synaptic transmission;protein transport;Cell structure and motility	PATH: hsa04140 Regulation of autophagy	1	1						1			
11345	GABARAPL2	GABA(A) receptor-associated protein-like 2	Non-motor microtubule binding protein	Cell structure and motility		1							1			
2593	GAMT	guanidinoacetate N-methyltransferase	methyltransferase activity;transferase activity;guanidinoacetate N-methyltransferase activity	Creatine biosynthetic process;muscle contraction;spermatogenesis;organ morphogenesis;regulation of multicellular organism growth	PATH: hsa00260 Glycine, serine and threonine metabolism PATH: hsa00330 Arginine and proline metabolism	1										
8328	GFI1B	growth factor independent 1B (potential regulator of CDKN1A, translocated in CML)	Zinc finger transcription factor	G1-specific transcription in mitotic cell cycle;cell proliferation;chromatin modification;multicellular organismal development;negative regulation of transcription from RNA polymerase II promoter;regulation of transcription, DNA-dependent;transcription;mRNA transcription												1
57120	GOPC	golgi associated PDZ and coiled-coil motif containing	Other transporter	ER to Golgi vesicle-mediated transport;Golgi to plasma membrane transport;apical protein localization;cytoplasmic sequestering of CFTR protein;protein homooligomerization;protein transport;Intracellular protein traffic		1							1			
84078	KBTBD7	kelch repeat and BTB (POZ) domain containing 7	Molecular function unclassified	Biological process unclassified		unknown										
83755	KRTAP4-12	keratin associated protein 4-12	Intermediate filament;Structural protein	Cell structure		1										
51631	LUC7L2	LUC7-like 2 (S. cerevisiae)	Molecular function unclassified	Biological process unclassified		unknown										
4188	MDFI	MyoD family inhibitor	Transcription factor	Activation of JNK activity;cell differentiation;cytoplasmic sequestering of transcription factor;dorsal/ventral axis specification;embryonic development;negative regulation of DNA binding;negative regulation of Wnt receptor signaling pathway;negative regulation of transcription from RNA polymerase II promoter;mRNA transcription regulation;Embryogenesis		1										1
64210	MMS19L	MMS19-like (MET18 homolog, S. cerevisiae)	Transcription cofactor;Other nucleic acid binding	Nucleotide-excision repair;positive regulation of transcription, DNA-dependent;response to hormone stimulus;transcription;two-component signal transduction system (phosphorelay);DNA repair;mRNA transcription regulation												1
64969	MRPS5	mitochondrial ribosomal protein S5	Ribosomal protein	translation;Protein biosynthesis				1							1	
4928	NUP98	nucleoporin 98kDa	Other transporter	DNA replication;intracellular protein transport across a membrane;mRNA transport;nuclear pore organization and biogenesis;nucleocytoplasmic transport;protein import into nucleus, docking;protein transport;RNA localization;Nuclear transport;Transport												1
4967	OGDH	oxoglutarate (alpha-ketoglutarate) dehydrogenase (lipoamide)	Dehydrogenase	Generation of precursor metabolites and energy;glycolysis;metabolic process;Tricarboxylic acid pathway	PATH: hsa00020 Citrate cycle (TCA cycle) PATH: hsa00310 Lysine degradation PATH: hsa00380 Tryptophan metabolism	1		1	1	1						
4988	OPRK1	opioid receptor, kappa 1	G-protein coupled receptor	G-protein coupled receptor protein signaling pathway;G-protein signaling, adenylate cyclase inhibiting pathway;behavior;immune response;sensory perception;signal transduction;synaptic transmission;viral genome replication;G-protein mediated signaling;Synaptic transmission;Pain sensation	PATH: hsa04080 Neuroactive ligand-receptor interaction		1									
5359	PLSCR1	phospholipid scramblase 1	Other transfer/carrier protein	Phospholipid scrambling;platelet activation;response to virus;Lipid and fatty acid transport;Phospholipid metabolism;Transport;Blood clotting			1									
23203	PMPCA	peptidase (mitochondrial processing) alpha	Reductase;Esterase;Metalloprotease	Proteolysis;Electron transport		1		1	1	1						
9512	PMPCB	peptidase (mitochondrial processing) beta	Reductase;Metalloprotease	Proteolysis;Electron transport		1		1	1	1						
5708	PSMD2	proteasome (prosome, macropain) 26S subunit, non-ATPase, 2	Other enzyme regulator	Proteolysis;Cell cycle control	PATH: hsa03050 Proteasome	1										
5747	PTK2	PTK2 protein tyrosine kinase 2	Non-receptor tyrosine protein kinase	Integrin-mediated signaling pathway;protein amino acid phosphorylation;signal complex assembly;Protein phosphorylation;Intracellular signaling cascade;Stress response;Developmental processes;Cell proliferation and differentiation	PATH: hsa04012 ErbB signaling pathway PATH: hsa04360 Axon guidance PATH: hsa04370 VEGF signaling pathway PATH: hsa04510 Focal adhesion PATH: hsa04670 Leukocyte transendothelial migration PATH: hsa04810 Regulation of actin cytoskeleton PATH: hsa05222 Small cell lung cancer	1										
5810	RAD1	RAD1 homolog (S. pombe)	Exodeoxyribonuclease;Hydrolase	DNA damage checkpoint;DNA repair;cell cycle checkpoint;meiotic prophase I;DNA repair;DNA recombination;Cell cycle control												1
788	SLC25A20	solute carrier family 25 (carnitine/acylcarnitine translocase), member 20	Transporter;Mitochondrial carrier protein	Lipid and fatty acid transport;Transport		1		1		1						
8878	SQSTM1	sequestosome 1	SH2 domain binding;SH2 domain binding;metal ion binding;protein binding;protein kinase binding;protein kinase binding;receptor tyrosine kinase binding;ubiquitin binding;ubiquitin binding;zinc ion binding	Apoptosis;cell differentiation;endosome transport;immune response;intracellular signaling cascade;positive regulation of transcription from RNA polymerase II promoter;protein localization;regulation of I-kappaB kinase/NF-kappaB cascade;regulation of I-kappaB kinase/NF-kappaB cascade;response to stress;ubiquitin-dependent protein catabolic process;Protein metabolism and modification;T-cell mediated immunity		1								1		1
6804	STX1A	syntaxin 1A (brain)	SNARE protein	Exocytosis;intracellular protein transport;neurotransmitter transport;regulation of insulin secretion;synaptic transmission;vesicle-mediated transport;Regulated exocytosis;Protein targeting;Small molecule transport;Synaptic transmission	PATH: hsa04130 SNARE interactions in vesicular transport PATH: hsa05020 Parkinson's disease	1	1									
23534	TNPO3	transportin 3	Transporter	RNA localization;Nuclear transport		1										1
26019	UPF2	UPF2 regulator of nonsense transcripts homolog (yeast)	Nuclease	RNA metabolic process;mRNA catabolic process, nonsense-mediated decay;mRNA export from nucleus;Protein biosynthesis;Other metabolism		1										1
7514	XPO1	exportin 1 (CRM1 homolog, yeast)	RNA binding; protein transporter activity	Intracellular protein transport;mRNA transport;protein import into nucleus, docking;response to virus		1										1