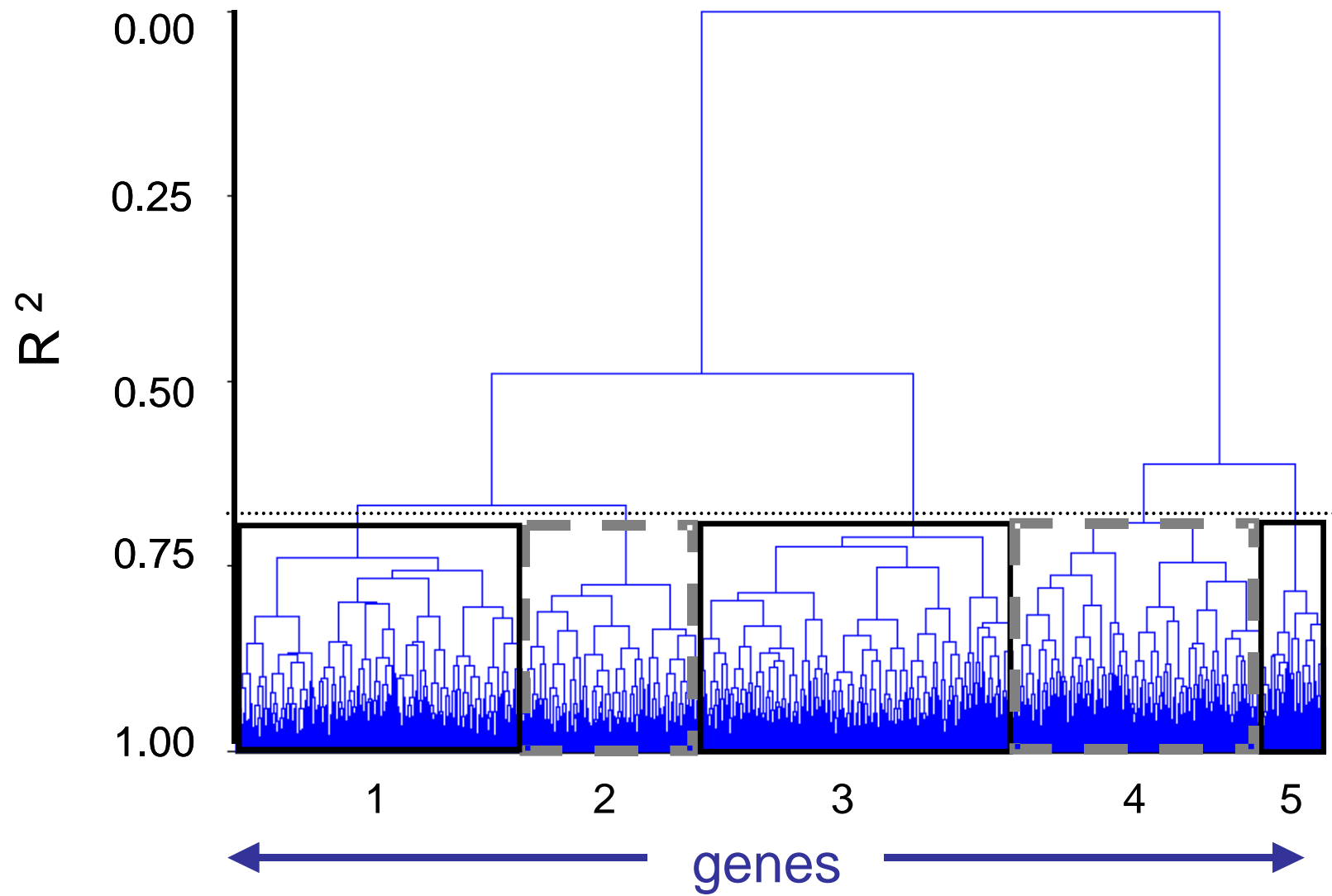


Supplemental Figure 1



Supplemental Table 1. Oligonucleotide sequences for primer/probe sets used for qRT-PCR.

Gene	Accession number	Forward primer	Probe	Reverse primer
NDUFB3	NM_002491	TCAGATTGCTGTCAGACATGG	Sybr Green detection	TGGTGTCCCTTCTATCTTCCA
NDUFB5	NM_002492	TTCGACACAGTGGAGACCAT	Sybr Green detection	TTCAGCTTGACCAATGAATACA
NDUFV1	NM_007103	CTGATCCCCAAGTCTGTGTGTGAGA	Sybr Green detection	GATGTCCGTCGAGCGGTCCAT
NDUFS1	NM_005006	GAATGTGATCTGCAGGACCAGTC	Sybr Green detection	GTCTTTACCAATGGCCCAATGT
SDHB	NM_003000	AAATGTGGCCCCATGGTATTG	Sybr Green detection	AGAGCCACAGATGCCTTCTCTG
SLC25A12	NM_003705	AGCACTCTAGCTGGCACAAGGAA	Sybr Green detection	AGTCAAGCGCCCTGAAGCATTATAT
18S	NM_000979	GATATGCTCATGTGGTGTGTA	Sybr Green detection	ACGTTCCACCTCATCTCA
CYC1	NM_001916	TGGCCCCCTCCATCTACAC	AGAGTTTGACGATGGCACCCAGCTA	ATCCTTGGCTATCTGGGACATG
SURF1	NM_003172	CCTATGTGGTCACTCCCTTCCA	TGGTGACTCCCAGGTCGGTGCA	TGGGAACGAACCCTCTATTTACC
PGC1 α	NM_015062	AGGTGAAAGTGAATACTGTTGGTTGA	TGCTGAAGAGGGAAAGTGAGCGATTAGTTGA	CATGTAGAATTGGCAGGTGGAA
PGC1 β	NM_133263	CAGCCACTCGAAGGAACTTCA	CTGAACACGGCCCTCTGCTCTACA	CGGATGCTTGGCGTTCTG
mtTFA	NM_009360	CCCAGATGCAAAAACACTACAGAACTAA	CGCAGTCACAACACTTACAAGCCAAAC	TCCGCCCTATAAGCATCTTGA
NRF1	NM_005011	CGTTGCCCAAGTGAATTATTCTG	TTGTTCCACCTCTCCATCAGCCA	CCCTGTAACGTGGCCCAAT
RPLP0	NM_001002	CCATTCTATCATCAACGGGTACAA	TCTCCACAGACAAGGCCAGGACTCG	AGCAAGTGGGAAGGTGTAATCC
mmNDUFB3	NM_025597	TGGCCATGGTAAAATGGAAC	CAGATTACAGACAGTGGAAAATTGAAGGGACG	AAGCTTCTTCTGCACCGTTTCT
mmNDUFB5	NM_025316	GCATCCGATATCAAGATGGATCG	CTGAAAAGAAGTACGAGAAAACCCTGGCTATCCT	CTTTAACCCTAAGTACGCTTTTCA
mmSLC25A12	NM_172436	CACCACAGGACCGAGAGTCA	TGCTTCAGGACCTGGGACTTTTCCG	GGCTTTGGCACCCCTGTACA
mmSDHB	NM_023374	CCCAGGAGGGCAAGCAA	AGTATCTGCAGTCCATCGAGGACCGG	GTACAGCCCCTCCAGCTTCT
mmCYC1	NM_025567	CAGCTACCCATGGTCTCATCGT	TCCGAATGCTGGTGTGGTCCAAGGA	CACCTGCTTGTATACCTGGAAACC
mmSURF1	NM_013677	AAGTGAATCCTGAGACCAGACAGA	AGGCCAGGTTCTGGGAGAAGTAGACC	TGTGAGCCTCACTATGCCAAT
mmPGC1 α	NM_008904	CATTTGATGCACTGACAGATGGA	CCGTGACCACTGACAACGAGGCC	CCGTGAGGCATGGAGGAA
mmPGC1 β	NM_133249	AGGAAGCGGGCGGAAA	AGAGATTTTCAATGTATACCACACGGCCTTCA	CTACAATCTCACCGAACCTCAA
mmCOXII	NC_005089	TTTTCAGGCTTACCCTAGATGA	CATGAGCAAAAAGCCACTTCGCCA	GAAGAATGTTATGTTTACTCCTACGAATATG
mmUCP2	NM_011671	GCGTTCTGGGTACCATCCTAAC	CGCACTGAGGGTCCACGCAGC	GCGACCAGCCCATTGTAGA
mmCycB	NM_011149	GGTGGAGAGCACCAAGACAGA	ATCCTTCAGTGGCTGTCCCGCT	GCCGGAGTCGACAATGATG

NDUFB3 NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 3; NDUFB5 NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 5; NDUFV1 NADH dehydrogenase (ubiquinone) flavoprotein 1; NDUFS1 NADH dehydrogenase (ubiquinone) Fe-S protein 1; SDHB succinate dehydrogenase complex, subunit B; SLC25A12 solute carrier family 25 (mitochondrial carrier); 18S 18S ribosomal RNA; CYC1 cytochrome c-1; SURF1 surfait 1; PGC1 α peroxisome proliferative activated receptor, gamma, coactivator 1, alpha; PGC1 β peroxisome proliferative activated receptor, gamma, coactivator 1, beta; mtTFA transcription factor A, mitochondrial; NRF1 nuclear respiratory factor-1; RPLP0 ribosomal protein, large, P0; mm mus musculus; mmNDUFB3 NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 3; mmNDUFB5 NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 5; mmSLC25A12 solute carrier family 25 (mitochondrial carrier); mmSDHB succinate dehydrogenase complex, subunit B; mmCYC1 cytochrome c-1; mmSURF1 surfait 1; mmPGC1 α peroxisome proliferative activated receptor, gamma, coactivator 1, alpha; mmPGC1 β peroxisome proliferative activated receptor, gamma, coactivator 1, beta; mmCOXII cytochrome c oxidase II, mitochondrial; mmUCP2 uncoupling protein 2; mmCycB peptidylprolyl isomerase B (cyclophilin B). For all assays performed using SYBR Green I detection, 18S was used.

Supplemental Table 2. Microarray 'Hit' List

CLUSTER	ACCESSION	GENE DESCRIPTION	FOLD CHANGE	DIRECTION	FUNCTION	BONFERRONI P
1	NM_016699	Human sperm-specific protein (LOC51170), mRNA	2.1	down	biological process unknown	0.00009
1	AK002789	Homo sapiens cDNA FL20872 fs, clone COLC3841	2.5	down	biological process unknown	1.4217E-09
1	AK01462	Homo sapiens cDNA FL11400 fs, clone HEMBA100673	2.4	down	biological process unknown	1.3797E-05
1	AL117663	Homo sapiens mRNA, cDNA DKF Zp586C0224 (from clone DKF Zp586C0224)	2.2	down	biological process unknown	0.00005843
1	AL131897	Homo sapiens mRNA, cDNA DKF Zp43462411 (from clone DKF Zp43462411)	2.2	down	biological process unknown	0.00170987
1	AK002032	Homo sapiens cDNA FL20825 fs, clone AKC611649	1.8	down	biological process unknown	0.00025246
1	L19362	Human (clone xp.1) mRNA sequence	1.8	down	biological process unknown	0.00044252
1	AK022297	Homo sapiens cDNA FL12235 fs, clone MAMMA1001243	1.7	down	biological process unknown	0.00513922
1	NM_016417	Homo sapiens clone FL184739 (LOC512718), mRNA	1.5	down	biological process unknown	0.00147364
1	AF106156	Homo sapiens full length insert cDNA clone ZB98142	1.5	down	biological process unknown	0.00237467
1	AF109102	Homo sapiens clone IMAGE_21785	2.1	down	biological process unknown	0.00281166
1	AB029946	Homo sapiens mRNA for KIAA1045 protein, partial cds	1.5	down	biological process unknown	0.00099956
1	AL117363	Homo sapiens mRNA, cDNA DKF Zp43401026 (from clone DKF Zp43401026)	1.4	down	biological process unknown	0.00266574
1	AK028037	Homo sapiens cDNA FL20236 fs, clone HRC02954	1.4	down	biological process unknown	0.00099269
1	X17638	H sapiens SRI mRNA	1.6	down	biological process unknown	0.00688159
1	AF086350	Homo sapiens full length insert cDNA clone ZKAC608	2.2	down	biological process unknown	0.00801914
1	AL151476	Homo sapiens mRNA, cDNA DKF Zp761C082 (from clone DKF Zp761C082)	1.7	down	cell adhesion	0.00809978
1	NM_001491	Homo sapiens mRNA for KIAA1176 protein, partial cds	1.4	down	complex (NEMO to ubiquitin)	0.00127587
1	D87292	Homo sapiens mRNA for rhodanese, complete cds	1.9	down	cytosolic catabolism	0.00610911
1	AB037743	Homo sapiens mRNA for KIAA1322 protein, partial cds	1.4	down	developmental processes	0.00100286
1	AF052087	Homo sapiens clone Z8604 mRNA sequence	1.1	down	DNA packaging	3.34674E-06
1	AB040490	Homo sapiens mRNA for KIAA1176 protein, partial cds	1.4	down	plasma metabolism	0.00039728
1	NM_005532	Homo sapiens propionyl Coenzyme A carboxylase, beta polypeptide (PCCB), nuclear gene encoding mitochondrial protein, mRNA	1.6	down	fatty acid catabolism	2.98029E-06
1	NM_000155	Homo sapiens galactose-1-phosphate uridylyltransferase (GALT), mRNA	1.6	down	galactose metabolism	0.00064843
1	NM_007126	Homo sapiens vesicle-containing protein (VCP), mRNA	2	down	intracellular protein traffic	0.00041326
1	NM_016556	Homo sapiens DKF ZP564Z21 protein (DKF ZP564Z21), mRNA	1.7	down	intracellular processing	1.14425E-07
1	NM_002487	Homo sapiens nuclear (mouse) homolog (NDN), mRNA	1.2	down	neurogenesis	0.00723221
1	NM_000476	Homo sapiens adenylate kinase 1 (AK1), nuclear gene encoding mitochondrial protein, mRNA	1.5	down	nucleic acid metabolism	0.00090824
1	AB039603	Homo sapiens sp.1 mRNA for interferon responsive finger protein 1 long form, complete cds	2	down	pathogenesis	0.00120886
1	NM_016112	Homo sapiens calyculin: tetrahydroimidazo[4,5-b]pyridin-2(1H)-one	2	down	protein synthesis inhibition	0.00149464
1	NM_000566	Homo sapiens embryonic LUCY11, mRNA	1.6	down	proliferation and peptidolysis	0.00039832
1	NM_004236	Homo sapiens thyroid receptor interacting protein 15 (TRIP15), mRNA	1.9	down	signal transduction	0.00606494
1	NM_003974	Homo sapiens docking protein 2, SHAD (DOK2), mRNA	1.4	down	signal transduction (cell surface receptor)	0.005136911
1	AF160189	Homo sapiens AST1 protein mRNA, partial cds	1.6	down	transcription regulation	0.00143671
1	NM_001291	Homo sapiens cyclic nucleotide-gated channel beta 1 (CNGB1), mRNA, and translated products	1.7	down	vision	2.0146E-09
1	L23867	Homo sapiens mRNA fragment	1.8	up	biological process unknown	9.4574E-08
1	L23869	Homo sapiens mRNA fragment	1.8	up	biological process unknown	9.4574E-08
1	L23870	Homo sapiens mRNA fragment	1.8	up	biological process unknown	9.4574E-08
1	L43148	Homo sapiens mRNA fragment	1.8	up	biological process unknown	9.4574E-08
1	L43147	Homo sapiens mRNA fragment	1.8	up	biological process unknown	9.4574E-08
1	L43149	Homo sapiens mRNA fragment	1.8	up	biological process unknown	9.4574E-08
1	L43150	Homo sapiens mRNA fragment	1.8	up	biological process unknown	9.4574E-08
1	AL149411	Homo sapiens mRNA, cDNA DKF Zp586B012 (from clone DKF Zp586B012)	1.7	down	biological process unknown	2.22656E-06
1	NM_018593	Homo sapiens hypothetical protein PRO0811 (PRO0811), mRNA	1.7	up	biological process unknown	0.000337473
1	X04236	Human small cellular 7.5K mRNA	1.2	up	biological process unknown	0.00113783
1	L09070	Homo sapiens mRNA fragment	1.8	up	blood coagulation	9.4574E-08
1	L09071	Homo sapiens mRNA fragment	1.8	up	blood coagulation	9.4574E-08
1	L09080	Homo sapiens mRNA fragment	1.8	up	blood coagulation	9.4574E-08
1	L09081	Homo sapiens mRNA fragment	1.8	up	blood coagulation	9.4574E-08
1	L09100	Homo sapiens mRNA fragment	1.8	up	blood coagulation	9.4574E-08
1	L09162	Homo sapiens mRNA fragment	1.8	up	blood coagulation	9.4574E-08
1	L10146	Homo sapiens mRNA fragment	1.8	up	blood coagulation	9.4574E-08
1	Z36789	H sapiens (x138) mRNA, 250bp	1.9	up	blood coagulation	2.33058E-06
1	NM_005655	Homo sapiens TGF β inducible early growth response (TIEG), mRNA	1.9	up	cell proliferation	1.3307E-09
1	NM_016480	Homo sapiens hypothetical protein (HSPC228), mRNA	1.6	up	cell wall integrity	0.160729E-09
1	L09056	Homo sapiens mRNA fragment	1.8	up	chymotrypsin	9.4574E-08
1	L09092	Homo sapiens mRNA fragment	1.8	up	chymotrypsin	9.4574E-08
1	L09095	Homo sapiens mRNA fragment	1.8	up	chymotrypsin	9.4574E-08
1	L09099	Homo sapiens mRNA fragment	1.8	up	chymotrypsin	9.4574E-08
1	L10140	Homo sapiens mRNA fragment	1.8	up	chymotrypsin	9.4574E-08
1	L10141	Homo sapiens mRNA fragment	1.8	up	chymotrypsin	9.4574E-08
1	L10147	Homo sapiens mRNA fragment	1.8	up	chymotrypsin	9.4574E-08
1	L10148	Homo sapiens mRNA fragment	1.8	up	chymotrypsin	9.4574E-08
1	L10151	Homo sapiens mRNA fragment	1.8	up	chymotrypsin	9.4574E-08
1	L09802	Homo sapiens mRNA fragment	1.8	up	humoral defense mechanism	9.4574E-08
1	L09878	Homo sapiens mRNA fragment	1.8	up	humoral defense mechanism	9.4574E-08
1	L09899	Homo sapiens mRNA fragment	1.8	up	humoral defense mechanism	9.4574E-08
1	L09698	Homo sapiens mRNA fragment	1.8	up	humoral defense mechanism	9.4574E-08
1	NM_003238	Homo sapiens transferrin receptor (p90, CD71) (TFRC), mRNA	1.5	up	iron transport	0.009
1	NM_001492	Homo sapiens growth differentiation factor 1 (GDF1), mRNA	1.4	up	membrane targeting	3.26237E-07
1	NM_009584	Homo sapiens prostaglandin D2 synthase (PTG2, trany) (PTGDS), mRNA	1.9	up	prostaglandin metabolism	4.78947E-06
1	NM_011049	Homo sapiens hypothetical protein L20084 (FLJ20084), mRNA	1.3	up	protein modification	0.00088306
1	NM_000067	Homo sapiens carbonic anhydrase IV (CA4), mRNA	1	up	protein targeting	0.00292499
1	L09067	Homo sapiens mRNA fragment	1.8	up	proteolysis and peptidolysis	9.4574E-08
1	NM_007163	Homo sapiens epidermal growth factor (beta-uregulin) (EGF), mRNA	1.7	up	signal transduction	0.00176954
1	L01148	Human interleukin-1 receptor soluble form mRNA, complete cds	1.2	up	signal transduction (cell surface receptor)	0.00100714
2	AF124745	Homo sapiens full length insert cDNA clone YP99107	1.2	up	biological process unknown	3.35948E-09
2	AF070565	Homo sapiens clone 24425 mRNA sequence	2	down	biological process unknown	2.38024E-08
2	AL149461	Homo sapiens mRNA, cDNA DKF Zp566B143 (from clone DKF Zp566B143)	1.6	down	biological process unknown	2.13073E-05
2	AL296569	Homo sapiens mRNA, cDNA DKF Zp43106B4 (from clone DKF Zp43106B4)	1.8	down	biological process unknown	0.00009111
2	AL052448	Homo sapiens mRNA, cDNA DKF Zp586C1523 (from clone DKF Zp586C1523)	2	down	biological process unknown	9.52366E-05
2	AF086254	Homo sapiens full length insert cDNA clone ZD43410	1.1	down	biological process unknown	0.000105155
2	AK007956	Homo sapiens cDNA FL11044 fs, clone PLACE1004451	1.4	down	biological process unknown	0.00256093
2	NM_000083	Homo sapiens chloride channel 1, skeletal muscle (CLCN1), mRNA	1.6	down	chloride transport	2.59873E-07
2	NM_001826	Homo sapiens chloride channel 1 (CLCN1), mRNA	1.6	down	chloride transport	0.00176818
2	NM_017781	Homo sapiens DKF ZP564K247 protein (DKF ZP564K247), mRNA	1.4	down	electron transport	0.00243284
2	NM_004170	mRNA	1.3	down	glutamate transport	0.000786263
2	NM_016467	Homo sapiens uncharacterized hematopoietic stem/progenitor cells protein MD0502 (MD0502), mRNA	1.8	down	immune response	0.00086921
2	NM_000466	Homo sapiens feline collagen fibrinogen domain-containing 3 (Fkappa antigen) (FCN3), mRNA	1.6	down	chymotrypsin	0.00092942
2	NM_000717	Homo sapiens carbonic anhydrase IV (CA4), mRNA	1.5	down	protein targeting	0.0041672
2	NM_001344	Homo sapiens ubiquitin-conjugating enzyme E2H (homologous to yeast UbcH2) (UBE2H), mRNA	1.4	down	proteolysis and peptidolysis	0.66848E-06
2	AK026637	Homo sapiens cDNA FL22004 fs, clone HE196671	2.1	down	sensory perception	3.78602E-08
2	NM_016159	Homo sapiens KIAA0174 gene product (KIAA0174), mRNA	1.2	down	chemotaxis	0.00081115
2	NM_014752	Homo sapiens KIAA0102 gene product (KIAA0102), mRNA	1.2	down	steroid metabolism	0.00054074
2	NM_003167	Homo sapiens sulfotransferase family 2A, dehydroepiandrosterone (DHEA)-preferring, member 1 (SULT2A1), mRNA	1.3	down	steroid metabolism	0.00846903
2	NM_014845	Homo sapiens KIAA0274 gene product (KIAA0274), mRNA	1.6	down	synaptic vesicle endocytosis	4.30696E-09
2	AF055830	Homo sapiens clone 24523 mRNA sequence	1.5	down	transcription regulation	0.00140267
2	NM_007016	Homo sapiens protein similar to E. coli ynfj and R. capsulatus HNR3 (PP3B), mRNA	1.4	down	de novo pyrimidine biosynthesis	0.00204968
2	NM_000375	Homo sapiens voltage-dependent anion channel 2 (VMAC2), nuclear gene encoding mitochondrial protein, mRNA	1.5	down	anion transport	2.2842E-06

2	M5536	Human glucose transporter pseudogene	1.4	up	biological process unknown	4.688E-12
2	AF08551	Human SLC5C1 mRNA, partial cds	1.2	up	biological process unknown	7.2417E-09
2	AL161991	Human sapiens mRNA, cDNA DKF(Z)761C169 from clone DKF(Z)761C169, partial cds	1.4	up	biological process unknown	6.2599E-08
2	U10511	Human clone Z012 Csi-dua1 critical region mRNA, partial sequence	1.9	up	biological process unknown	1.5762E-06
2	L23867	Human sapiens mRNA fragment	1.8	up	biological process unknown	0.001922163
2	L23869	Human sapiens mRNA fragment	1.8	up	biological process unknown	0.001922163
2	L23870	Human sapiens mRNA fragment	1.8	up	biological process unknown	0.001922163
2	L41345	Human sapiens mRNA fragment	1.8	up	biological process unknown	0.001922163
2	L41347	Human sapiens mRNA fragment	1.8	up	biological process unknown	0.001922163
2	L41349	Human sapiens mRNA fragment	1.8	up	biological process unknown	0.001922163
2	L41350	Human sapiens mRNA fragment	1.8	up	biological process unknown	0.001922163
2	AK024927	Human sapiens cDNA FL121274 f6, clone COL01781	1.5	up	biological process unknown	0.001126244
2	X14804	H.sapiens D54 mRNA	1.6	up	biological process unknown	0.00176293
2	AK022610	Human sapiens cDNA FL13548 f6, clone PLACE100768	1.4	up	biological process unknown	0.00504947
2	AK028479	Human sapiens cDNA FL13028 f6, clone UNG01738	2.1	up	biological process unknown	0.00837973
2	L09070	Human sapiens mRNA fragment	1.8	up	blood coagulation	0.001922163
2	L09071	Human sapiens mRNA fragment	1.8	up	blood coagulation	0.001922163
2	L09080	Human sapiens mRNA fragment	1.8	up	blood coagulation	0.001922163
2	L09081	Human sapiens mRNA fragment	1.8	up	blood coagulation	0.001922163
2	L09100	Human sapiens mRNA fragment	1.8	up	blood coagulation	0.001922163
2	L09102	Human sapiens mRNA fragment	1.8	up	blood coagulation	0.001922163
2	L10146	Human sapiens mRNA fragment	1.8	up	blood coagulation	0.001922163
2	AK221566	Human sapiens mRNA containing UTR1 and mRNA, 1	1.2	up	cell growth and maintenance	5.9063E-06
2	L25080	Human sapiens CYP-binding protein (P4A) mRNA, complete cds	1.4	up	cell growth and maintenance	0.00252602
2	L09086	Human sapiens mRNA fragment	1.8	up	chymotrypsin	0.001922163
2	L09092	Human sapiens mRNA fragment	1.8	up	chymotrypsin	0.001922163
2	L09095	Human sapiens mRNA fragment	1.8	up	chymotrypsin	0.001922163
2	L09099	Human sapiens mRNA fragment	1.8	up	chymotrypsin	0.001922163
2	L10140	Human sapiens mRNA fragment	1.8	up	chymotrypsin	0.001922163
2	L10141	Human sapiens mRNA fragment	1.8	up	chymotrypsin	0.001922163
2	L10147	Human sapiens mRNA fragment	1.8	up	chymotrypsin	0.001922163
2	L10148	Human sapiens mRNA fragment	1.8	up	chymotrypsin	0.001922163
2	L10151	Human sapiens mRNA fragment	1.8	up	chymotrypsin	0.001922163
2	AB011152	Human sapiens mRNA for KIAA0680 protein, partial cds	1.4	up	cytoskeleton integrity	2.58635E-05
2	NM_020367	Human sapiens HIRB9A (C12orf6), mRNA	1.1	up	cytoskeleton integrity	0.00043576
2	AK022483	Human sapiens cDNA FL13621 f6, clone PLACE101964	1.1	up	cytoskeleton integrity	0.00036689
2	AK022872	Human sapiens cDNA FL12810 f6, clone NT28P000464, weakly similar to DNA CROSS-LINK REPAIR PROTEIN P5025NM1	1.6	up	DNA repair	3.07146E-07
2	NM_004299	Human sapiens RecQ protein 5 (RECQ5) mRNA	1.4	up	DNA repair	1.43416E-06
2	NM_020907	Human sapiens RecQ protein like (DNA helicase D1 like) (RECQL1) mRNA	1.5	up	DNA repair	0.000816687
2	NM_014183	Human sapiens hypothetical protein FL110101 (FL110101), mRNA	1	up	DNA repair	0.001142495
2	M20699	Human terminal deoxynucleotidyltransferase gene, clone 7	1.4	up	DNA replication	5.20375E-09
2	NM_001714	Human sapiens Bicaudal D (Drosophila) homolog 1 (BICD1) mRNA	1.5	up	embryogenesis and morphogenesis	1.56169E-06
2	NM_014590	Human sapiens endonuclease/reoviral family W, member 1 (cyclyp1) (ERW1), mRNA	1.2	up	embryogenesis and morphogenesis	2.4067E-06
2	X17112	H.sapiens mRNA for glycogen kinase kinase-specific 2	1.9	up	enzyme metabolism	0.00135017
2	L09092	Human sapiens mRNA fragment	1.8	up	humoral defense mechanism	0.001922163
2	L09078	Human sapiens mRNA fragment	1.8	up	humoral defense mechanism	0.001922163
2	L09089	Human sapiens mRNA fragment	1.8	up	humoral defense mechanism	0.001922163
2	L09098	Human sapiens mRNA fragment	1.8	up	humoral defense mechanism	0.001922163
2	NM_020364	Human sapiens intracytosolic zinc protein (PZFP) mRNA	1.6	up	intracellular protein traffic	0.00591476
2	AB031102	Human sapiens mRNA for KIAA1276 protein, partial cds	1.5	up	muscle contraction	2.87047E-07
2	NM_019795	Human sapiens neuronal cell death-inhibitor protein (LOC531614), mRNA	1.5	up	neuric acid metabolism	3.8623E-05
2	NM_020367	Human sapiens Sirtuin-5 methyltransferase (SIRT5) mRNA	1.3	up	neuric acid metabolism	0.00035568
2	NM_010360	Human sapiens clone H00471 PRC0A17p (LOC51204), mRNA	1.5	up	nucleotide excision repair	3.44837E-06
2	NM_014873	Human sapiens KIAA0205 gene product (KIAA0205), mRNA	1.7	up	phosphatidic acid biosynthesis	0.003616239
2	L09097	Human sapiens mRNA fragment	1.8	up	proteolysis and peptidolysis	0.001922163
2	AB010310	Human sapiens mRNA for KIAA0761 protein, partial cds	1.4	up	pyruvate metabolism	0.000210553
2	NM_005513	Human sapiens interactor, gamma inducible protein 18 (IPI18) mRNA	1.3	up	transcription regulation	6.62181E-07
2	AJ_291181	Human sapiens LHX3 protein mRNA, complete cds	1.4	up	transcription regulation	0.00041144
2	NM_006586	Human sapiens solute carrier family 12 (potassium/chloride transporters), member 7 (SLC12A7), mRNA	2.8	up	transport	0.000156665
2	AF000637	Human sapiens E1a CTPase A protein (E1A) A1 mRNA, partial cds	1.5	up	transport	0.00000205
2	X09099	Human sapiens unknown gene, interactor of co-repressing repressor	1.4	up	transport	8.29798E-07
3	NM_014028	Human sapiens HSPCD19 protein (HSPCD19), mRNA	1.2	down	biological process unknown	1.26257E-08
3	AK022850	Human sapiens cDNA FL112788 f6, clone NT28P0001944	1.4	down	biological process unknown	1.5382E-07
3	AJ_131855	Human sapiens clone 2056 mRNA sequence	1.5	down	biological process unknown	2.8483E-07
3	AJ_141343	Human sapiens full length insert cDNA clone YB11808	1.9	down	biological process unknown	5.4735E-06
3	L39924	Human sapiens (clone HPL114E) mRNA, partial EST	1.4	down	biological process unknown	2.23848E-05
3	AK001728	Human sapiens cDNA FL110366 f6, clone NT28M0001420	1.8	down	biological process unknown	2.26177E-05
3	NM_014118	Human sapiens PRO0159 protein (PRO0159), mRNA	1.9	down	biological process unknown	4.2962E-05
3	AF088878	Human sapiens full length insert cDNA clone YB18405	1.3	down	biological process unknown	7.2132E-06
3	AL109715	Human sapiens mRNA full length insert cDNA clone EUROIMAGE 430268	1.4	down	biological process unknown	0.00185708
3	AK002150	Human sapiens cDNA FL111288 f6, clone PLACE1009607	1.8	down	biological process unknown	0.000234275
3	AJ_109818	Human sapiens mRNA full length insert cDNA clone EUROIMAGE 19107	1.3	down	biological process unknown	0.000427163
3	AJ_009085	Human sapiens clone TRC5 Csi-dua1 critical region mRNA	1.4	down	biological process unknown	0.00044526
3	AL04342	Human sapiens mRNA, cDNA DKF(Z)556A191 from clone DKF(Z)556A191	1.5	down	biological process unknown	0.000592814
3	NM_014157	Human sapiens HSPC065 protein (HSPC065), mRNA	1.4	down	biological process unknown	0.00027676
3	AK002109	Human sapiens cDNA FL11247 f6, clone PLACE1008893	1.4	down	biological process unknown	0.001115375
3	AK002671	Human sapiens cDNA FL22976 f6, clone ZAT16027	1.4	down	biological process unknown	0.00259971
3	AJ_142349	Human sapiens full length insert cDNA clone YB44E02	1.4	down	biological process unknown	6.00315E-04
3	AL390656	Human sapiens mRNA full length insert cDNA clone EUROIMAGE 328974	1.3	down	biological process unknown	0.00024825
3	U28446	Human mRNA for cyclotratin B, 5'UTR (sequence from the 5' cap to the start codon)	1.8	down	biological process unknown	0.004367359
3	AK001713	Human sapiens cDNA FL113111 f6, clone PLACE1010102	1.4	down	biological process unknown	0.00648993
3	AL131113	Human sapiens mRNA, cDNA DKF(Z)61M0121 from clone DKF(Z)61M0121	1.4	down	biological process unknown	0.001127146
3	AK023600	Human sapiens cDNA FL13538 f6, clone PLACE1006617	1.5	down	biological process unknown	0.00889778
3	AK026099	Human sapiens cDNA FL122466 f6, clone HRC09457	2.2	down	biological process unknown	0.009163995
3	NM_020348	Human sapiens growth arrest-specific 1 (GAS1) mRNA	1.7	down	cell cycle arrest	0.00024029
3	NM_019386	Human sapiens candidate mediator of the 53-dependent G2 arrest (BEPFM2), mRNA	1.3	down	cell cycle arrest	0.000338642
3	NM_006550	Human sapiens Bcl2-interacting silencer binding protein (BSIP) mRNA	1.8	down	developmental processes	0.008101064
3	AL131703	Human sapiens mRNA, cDNA DKF(Z)564P1772 from clone DKF(Z)564P1772	1.2	down	DNA packaging	0.00181628
3	NM_001143	Human sapiens tumoral hyaluronate (TH) mRNA	1.8	down	laminar metabolism	0.00004016
3	NM_001413	Human sapiens normal glutathione S-transferase 3 (GSTA3) mRNA, and translated products	1.7	down	oxidative metabolism	0.000141144
3	NM_004837	Human sapiens geranylgeranyl diphosphate synthase 1 (GGPS1), mRNA	1.4	down	lipid metabolism	0.001170041
3	NM_001305	Human sapiens solute carrier family 25 (mitochondrial carrier, Anion), member 12 (SLC25A12) mRNA	1.8	down	mitochondrial transport	4.5892E-09
3	NM_014394	Human sapiens hypothetical protein FL111342 (FL111342), mRNA	2	down	nitrogen metabolism	0.002850132
3	AL162605	Human sapiens mRNA, cDNA DKF(Z)62K732 from clone DKF(Z)62K732	1.5	down	transcription regulation	0.000966807
3	L23544	Human (clone Z1519) retinal mRNA	1.7	down	biological process unknown	1.68971E-08
3	AK024244	Human sapiens cDNA FL114182 f6, clone NT28P0004675	2.1	up	biological process unknown	1.01781E-07
3	NM_018224	Human sapiens hypothetical protein FL110803 (FL110803), mRNA	1.6	up	biological process unknown	6.826E-07
3	AJ_086635	Human sapiens full length insert cDNA clone ZEU0108	1.7	up	biological process unknown	5.44637E-05
3	AJ_142349	Human sapiens full length insert cDNA clone YB00209	1.1	up	biological process unknown	6.1082E-05
3	AK026886	Human sapiens cDNA FL122033 f6, clone HE088016, highly similar to H5U43374 human normal keratinocyte mRNA	1.6	up	biological process unknown	0.000105142
3	AF028115	Human sapiens clone Z368 mRNA sequence	1.3	up	biological process unknown	0.000390263
3	AF049020	Human sapiens clone H00352 PRC00352 mRNA, partial cds	1.2	up	biological process unknown	0.001031299

3	AF088035	Human full length insert cDNA clone ZC26504	1.5	yes	biological process unknown	0.001835077
3	AB024977	Human sapiens cDNA FLJ1998 for UDP-Galactose 4-epimerase II (UGALACT4) (UGALACT4) complete cds	1.1	no	carbohydrate metabolism	2.40574E-06
3	NM_005651	Human sapiens lysophospholipase 9 (alpha) (L13) (lysophospholipase9) (L13) mRNA	1.2	no	carbohydrate metabolism	0.002989979
3	AB029396	Human sapiens hu GCAT P mRNA for glucanuronyltransferase, complete cds	1.2	yes	carbohydrate metabolism	0.005055305
3	NM_006782	Human sapiens zinc finger protein in MEN1 region (MGC4) mRNA	1.6	yes	cell growth and maintenance	0.000808155
3	NM_011283	Human sapiens procollagen C1-endopeptidase enhancer 2 (PCCOLCE2) mRNA	1.5	yes	cell growth and maintenance	0.001143091
3	NM_014430	Human sapiens cAMP binding protein (RBM4) mRNA	1.7	yes	cell growth and maintenance	0.001156682
3	NM_001718	Human sapiens bone morphogenetic protein 6 (BMP6) mRNA	1.1	yes	cell growth and maintenance	0.004081709
3	DJ3487	Human mRNA for KIAA0153 gene, partial cds	1.2	yes	cytoskeleton integrity	8E-15
3	NM_017721	Human sapiens hypothetical protein FLJ20541 (FLJ20541) mRNA	1.5	yes	cytoskeleton integrity	2.11994E-05
3	AK022060	Human sapiens cDNA FLJ129987c, clone NT 129992023	1.6	no	energy pathways	0.000269399
3	AL048679	Human gene from PAC 79K10, chromosome X, similar to heparan sulphate 6-sulfotransferase	1.3	yes	heparin sulfate biosynthesis	1.3547E-09
3	NM_006332	Human sapiens interferon, gamma-inducible protein 30 (IFI30) mRNA	1.7	yes	immune response	8.3858E-06
3	NM_002416	Human sapiens molecule induced by gamma interferon (MIG) mRNA	1.2	yes	immune response	0.00344768
3	NM_001070	Human sapiens UDP-glucosyltransferase 2 family, polypeptide B10 (UGT2B10) mRNA	1.9	no	metabolism	1.0130E-05
3	AL137519	Human sapiens mRNA, cDNA DKF Zp434A1518 (from clone DKF Zp434A1518), partial cds	1.9	yes	microtubule-based movement	0
3	NM_004925	Human sapiens splicing factor, arginine/serine-rich 5 (SF3F5) mRNA	1.4	yes	mRNA processing	4.88143E-05
3	AF120908	Human sapiens MAGE-D4 (MAGE-D4) mRNA, partial cds	1.4	yes	oncogenesis	1.9466E-11
3	L19178	Human sapiens histone H2A.1b mRNA, complete cds	1.8	no	peptide assembly	8.0185E-06
3	NM_002232	Human sapiens potassium voltage-gated channel, shaker related subfamily, member 3 (KCNAB3) mRNA	1.5	yes	potassium transport	0.00010528
3	AB037770	Human sapiens mRNA for KIAA1349 protein, partial cds	1.3	yes	transcription regulation	3.68379E-05
3	NM_017912	Human sapiens hypothetical protein FLJ20637 (FLJ20637) mRNA	1.4	yes	ubiquitination	4.50627E-06
4	004945	HUMAN OMBP1, THE 1ST OF FOUR 100% IDENTICAL CONSERVED REPEATS	1.4	yes	biological process unknown	2.42274E-06
4	L07383	Human sapiens E2 small nuclear RNA	1.8	no	biological process unknown	0.00020539
4	AK017722	Human sapiens cDNA FLJ11660 fs, clone HELM0100410	1.5	no	biological process unknown	0.00033026
4	AK022224	Human sapiens cDNA FLJ1162 fs, clone NT 2893002625	1.4	no	biological process unknown	0.00050031
4	AF108644	Human sapiens full length insert cDNA clone Y24021	1.3	no	biological process unknown	0.000107029
4	AK021125	Human sapiens cDNA FLJ10263 fs, clone HELM0100991	1.3	no	biological process unknown	0.00420517
4	L19249	Human clone ZB29 mRNA sequence	2.2	no	biological process unknown	0.00452961
4	AK000145	Human sapiens cDNA FLJ20158 fs, clone COL08935	1.2	no	biological process unknown	0.001709425
4	NM_001133	Human sapiens home oxygenase (hepoxalygin) 1 (HMOX1) mRNA	2.8	no	CYP steroid hormone biosynthesis	1.74019E-07
4	L082170	Human EST clone Z61000 mature transcription factor sequences	1.5	no	complex binding	0.00139618
4	NM_002563	Human sapiens purinergic receptor P2Y, G-protein coupled, 1 (P2RY1) mRNA	1.2	no	G-protein signaling, activates PLC	0.001918707
4	NM_014664	Human sapiens KIAA0615 gene product (KIAA0615) mRNA	1.6	no	proteolysis and peptidolysis	0.0017226
4	L02077	Human clone 199288 de novo marker transposon Hmar2 mRNA sequence	1.4	no	biological process unknown	9.44859E-07
4	L19443	Human clone Z556 mRNA sequence	1.7	no	biological process unknown	0.000172738
4	NM_012200	Human sapiens beta-1,3-galactosyltransferase 3 (galactosyltransferase 3) (B3GAT3) mRNA	1.5	yes	carbohydrate metabolism	0.000264031
4	NM_016709	Human sapiens PPAR(gamma) angiprotein related protein (PPAR), mRNA	1.3	yes	cell growth and maintenance	1.86277E-08
4	AL131724	Human sapiens mRNA, cDNA DKF Zp434D1319 (from clone DKF Zp434D1319), partial cds	1.3	yes	cell growth and maintenance	0.000100435
4	NM_011737	Human sapiens hypothetical protein FLJ20275 (FLJ20275) mRNA	1.6	yes	cell growth and maintenance	0.000120203
4	AK024607	Human sapiens cDNA FLJ14005 fs, clone YFMA1002361, moderately similar to Rattus norvegicus mRNA for protein phosphatase 1 (GL-subunit)	1.7	yes	glycogen metabolism	2.59537E-10
4	AF191033	Human sapiens cAMP binding protein RAB17B (RAB17B) mRNA, partial cds	1.8	yes	intracellular protein traffic	0.00138839
4	NM_002871	Human sapiens RAB interacting factor (RABIF) mRNA	1.5	yes	ion selective vesicle transport	0.000179949
4	NM_006765	Human sapiens Rabin protein cancer tumor suppressor protein (R31), mRNA	1.1	yes	protein nuclear import	1.01894E-06
4	NM_004113	Human sapiens fibroblast growth factor 126 (FGF126) mRNA	1.6	yes	signal transduction	0.00434052
5	NM_000079	Human sapiens glutamic oxaloacetic transaminase 1, soluble (aspartate aminotransferase 1) (GOT1) mRNA	1.7	yes	inorganic catabolism	0.000172809
5	AF120831	Human sapiens quantum nucleolar exchanger factor (QRNCE) 4b mRNA, 5' UTR and partial cds	2.1	no	biological process unknown	1.18110E-09
5	NM_016633	Human sapiens hypothetical protein PR02106 (PR02106) mRNA	1.8	no	biological process unknown	0.00555E-07
5	AF105022	Human sapiens full length insert cDNA clone ZC26610	1.5	no	biological process unknown	0.01105E-05
5	M11948	Human promyelocytic leukemia cell mRNA, clones pHE5 and pHE1	1.6	no	biological process unknown	0.00024091
5	L00962	Human clone MAB2817 (CA3) (E13) repeat-containing mRNA	1.7	no	biological process unknown	0.00089186
5	L19225	Human sapiens mRNA for fractalin, 5' untranslated, alternative 5' UTR	1.4	no	biological process unknown	0.00108915
5	AK020728	Human sapiens cDNA FLJ10075 fs, clone LINC57192	1.6	no	biological process unknown	0.001148951
5	AF147395	Human sapiens full length insert cDNA clone Y162-12	1.5	no	biological process unknown	0.001881459
5	X03168	Human mRNA for 5-protein	1.9	no	cell adhesion	0.001129344
5	AF104352	Human sapiens tyrosine ligase B mRNA, partial cds	1.3	no	cell cycle	0.00224214
5	NM_002492	Human sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 5 (114d), (SCQR) (NDUF8) mRNA, and translated products	1.9	no	complex (NADH to ubiquinone)	2.9910E-08
5	NM_002493	Human sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 4 (174d, B1) (NDUF8) mRNA, and translated products	1.4	no	complex 1 (NADH to ubiquinone)	0.00039787
5	NM_005006	Human sapiens NADH dehydrogenase (ubiquinone) Fe-S protein 1 (754d) (NADH-coenzyme Q reductase) (NDUF51) mRNA	2.4	no	complex 1 (NADH to ubiquinone)	0.001563059
5	NM_007079	Human sapiens protein tyrosine phosphatase type IVA, member 3 (PTP4A3) mRNA	1.7	no	DNA replication	1.1532E-05
5	NM_002000	Human sapiens succinate dehydrogenase complex, subunit B, non-vault (SDHB), nuclear gene encoding mitochondrial protein, mRNA	2.4	no	electron transport	0.000191835
5	AL137511	Human sapiens mRNA, cDNA DKF Zp47610222 (from clone DKF Zp47610222)	1.3	no	electron transport	0.001218442
5	NM_007103	Human sapiens NADH dehydrogenase (ubiquinone) flavoprotein 1 (F1) (NDUFV1) mRNA	1.9	no	energy pathways	0.000114478
5	NM_000016	Human sapiens acyl Coenzyme A dehydrogenase, C-4 to C-12 straight chain (ACADM), nuclear gene encoding mitochondrial product, mRNA	2.3	no	fatty acid beta-oxidation	0.0014041
5	NM_001359	Human sapiens 2,4-dihydroxy CoA reductase 1, mitochondrial (DCR1), mRNA	1.8	no	fatty acid beta-oxidation	0.00197959
5	NM_001995	Human sapiens fatty acid Coenzyme A ligase, long-chain 1 (FACL1), nuclear gene encoding mitochondrial protein, mRNA	2.2	no	fatty acid metabolism	8E-15
5	NM_000925	Human sapiens pyruvate dehydrogenase (lipoylase) beta (PDHB) mRNA	1.7	no	glucose metabolism	0.000125179
5	NM_002103	Human sapiens glycogen synthase 1 (muscle) (GYS1) mRNA	1.7	no	glycogen metabolism	0.00081999
5	AL131831	Human sapiens mRNA, cDNA DKF Zp434B619 (from clone DKF Zp434B619), partial cds	1.6	no	intracellular protein traffic	0.00958048
5	NM_018444	Human sapiens uncharacterized hemopoietic stem/progenitor cells protein MDS209 (MDS209) mRNA	1.9	no	microtubule-based process	3.0763E-08
5	AL050182	Human sapiens mRNA, cDNA DKF Zp58A1923 (from clone DKF Zp58A1923)	1.9	no	microtubule-based process	0.004033682
5	NM_002218	Human sapiens inter alpha (globulin) inhibitor H4 (plasma kallistatin sensitive glycoprotein) (IH4) mRNA	1.2	no	proteolysis and peptidolysis	0.00358615
5	S16438	Helicobacter naster fibronectin-binding complex 4, Helmer, mRNA, 2802 nt	2.2	no	DNA processing	2.40E-12
5	NM_002756	Human sapiens mitogen-activated protein kinase kinase 1 (MAP2KK1) mRNA	2	no	signal transduction	5.71804E-08
5	L064725	Human heat shock protein mRNA, complete cds	1.4	no	spermatid development	0.000542513
5	NM_007232	Human sapiens calcyriopodin 2, cardiac muscle (CACSD2) mRNA	1.8	no	striated muscle contraction	2.17972E-10
5	NM_015817	Human sapiens acylglucuronidyltransferase (1) (UGAT1) (UGAT1) (AC1), transcript variant 4 (L1), mRNA	1.9	no	synaptic transmission	1.23311E-07
5	NM_001754	Human sapiens nucleic acid phosphorylase, translation initiation factor 1, subunit 5 (open), (NED) (EIF3S5) mRNA	1.8	no	translational regulation, initiation	0.004731168
5	NM_006759	Human sapiens UDP-glucose pyrophosphorylase 2 (UGPP2) mRNA	2	no	UDP-glucose metabolism	1.0308E-07
5	AK022282	Human sapiens cDNA FLJ12220 fs, clone MAMMA1001060	1.9	yes	biological process unknown	1.02208E-08
5	L017072	Human tandem repeat region from histone H4/ubiquitin nuclear dyotrophy-associated mRNA clone: UNH4ubeta	1.3	yes	biological process unknown	1.35123E-06
5	NM_001492	Human sapiens TRAI1 gene (TRAI1) mRNA	1.8	no	biological process unknown	0.001131111
5	D16875	Human Hspic3 3' region cDNA, clone hend1106	1.4	yes	biological process unknown	0.000195273
5	L02812	Human sapiens G1-du-chal region mRNA, clone CSC3	1.6	yes	biological process unknown	0.00085626
5	AJ001804	Human sapiens DNA selection product, DCR1 24.0	1.2	yes	biological process unknown	0.001139771
5	AK022096	Human sapiens cDNA FLJ1208 fs, clone HELM0100850	1.4	no	biological process unknown	0.001103195
5	AK022343	Human sapiens cDNA FLJ12281 fs, clone MAMMA1001145	1.4	yes	biological process unknown	0.002352396
5	AK024832	Human sapiens cDNA FLJ20879 fs, clone AKM01314	1.1	yes	biological process unknown	0.001801208
5	NM_000496	Human sapiens gene predicted from cDNA with a complete coding sequence (KIAA0105) mRNA	1.8	yes	cell cycle	7.90626E-08
5	NM_001793	Human sapiens GLO2 protein (GLO2) mRNA	1.9	no	cytoskeleton integrity	2.2053E-05
5	NM_002162	Human sapiens hypothetical protein DKF Zp762f2011 (DKF Zp762f2011) mRNA	2.1	yes	developmental processes	6.8326E-07
5	NM_004506	Human sapiens D-phosphofructo-2-kinase/fructose-2,6-diphosphatase 3 (PFKFB3) mRNA	3.3	yes	fructose metabolism	2E-14
5	NM_002412	Human sapiens pyruvate dehydrogenase kinase, isoenzyme 4 (PKD4) mRNA	1.7	yes	glucose metabolism	0.000177176
5	NM_000796	Human sapiens insulin like growth factor binding protein 1 (IGFBP1) mRNA	1.9	yes	growth factor production	2.133E-11
5	NM_005900	Human sapiens MAZ5, son transcription enhancer factor 2, polypeptide 0 (myocyte enhancer factor 20) (MEF20) mRNA	1.4	yes	transcription regulation	0.009643229
5	NM_001647	Human sapiens apolipoprotein D (APOD) mRNA	1.7	yes	transport	0.002302229