

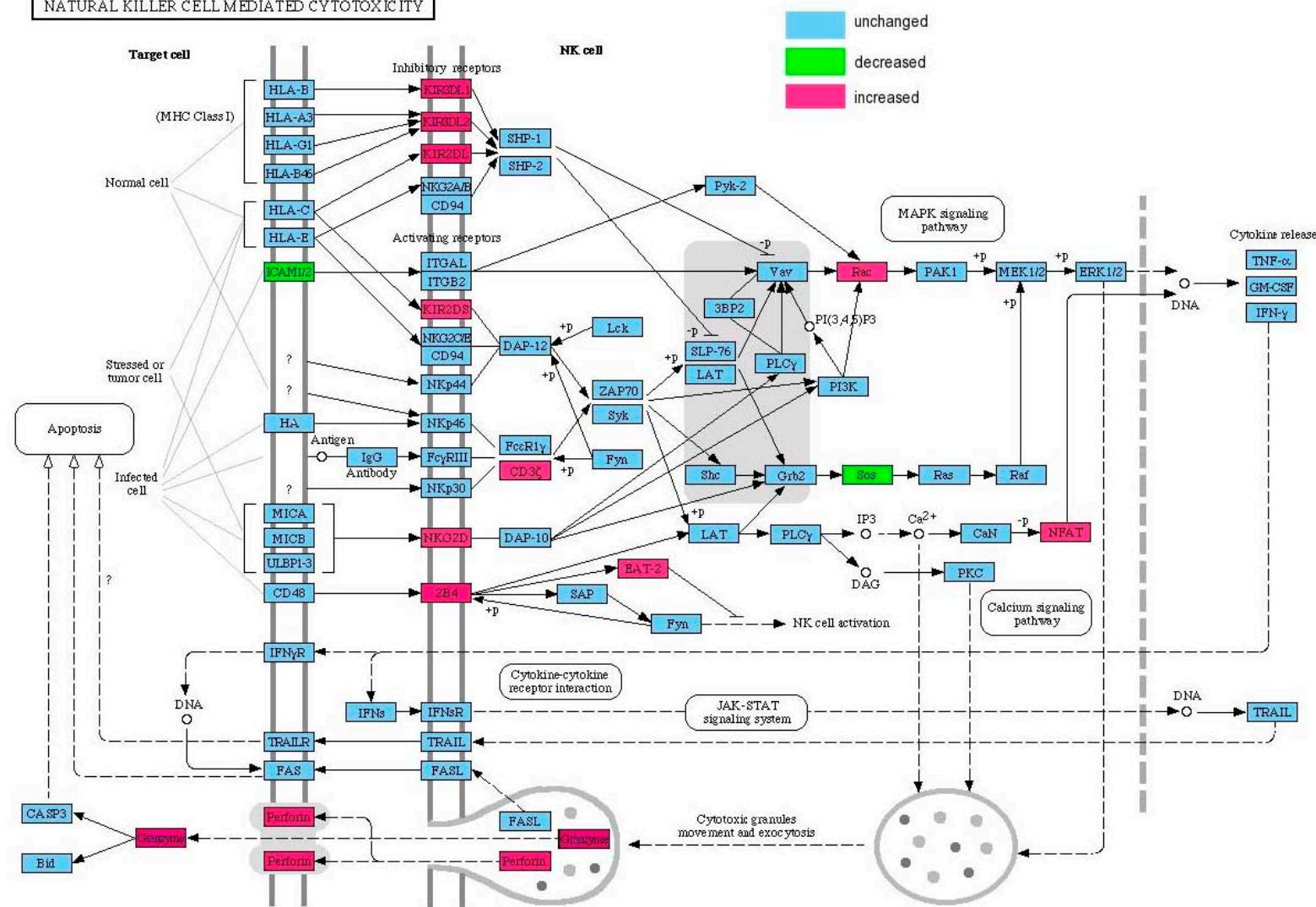
Supplemental Material

Figure 1. Components of the KEGG Natural Killer Cell Mediated Cytotoxicity pathway modified by arsenic exposure. Genes with statistically significant expression differences were mapped to the KEGG pathway. Colored shapes show increased expression (pink), decreased expression (green), or no statistically significant expression change (blue).

Table 1. Listing of all SAM-selected probes.

Table 2. Listing of all urinary arsenic SAM-selected probes.

NATURAL KILLER CELL MEDIATED CYTOTOXICITY



Supplemental Material, Figure 1. Components of the KEGG Natural Killer Cell Mediated Cytotoxicity pathway modified by arsenic exposure.

Supplemental Material, Table 1. All SAM-selected probes for high vs. low arsenic exposure.

Probe	Symbol	Description	Fold Change	Chromosome	Chromosome Location	GenBank	LocusLink	Cytoband	UniGene	PubMed	Gene Ontology	Pathway
203290_at	HLA-DQA1	major histocompatibility complex, class II, DQ alpha 1	3.38	6	32713160	NM_002122	3117	6p21.3	Hs.387679	70	integral to plasma membrane immune response immune response membrane integral to membrane antigen presentation, exogenous antigen processing, exogenous antigen via MHC class II MHC class II receptor activity MHC class II receptor activity MHC class II receptor activity	Cell adhesion molecules Antigen processing and Type I diabetes mellitus
207314_x_at	KIR3DL2	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2	2.25	19	60053740	NM_006737	3812	19q13.4	Hs.512572	19	receptor activity integral to plasma membrane cellular defense response membrane	Antigen processing and Natural killer cell mediated
1553177_at	SH2D1B	SH2 domain containing 1B	2.03	1	-160631679	BC022407	117157	1q21	Hs.350581	10	biological process unknown molecular function unknown intracellular signaling cascade cellular component unknown	Natural killer cell mediated cytotoxicity
212509_s_at	PSMD14	proteasome (prosome, macropain) 26S subunit, non-ATPase, 14	1.94	2	161873185	BF968134	10213	2q24.2	Hs.567410	3	proteasome complex (sensu Eukaryota) cytosol ubiquitin-dependent protein catabolism	Proteasome
211389_x_at	KIR3DL1	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 1	1.88	19	59989604	U73396	3811	19q13.4	Hs.512572 Hs.643606	32	receptor activity receptor activity integral to plasma membrane immune response immune response membrane natural killer cell activation negative regulation of natural killer cell activity MHC class I receptor activity HLA-B specific inhibitory MHC class I receptor activity HLA-B specific inhibitory MHC class I receptor activity	Antigen processing and Natural killer cell mediated
208179_x_at	KIR2DL3	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 3	1.82	19	59941785	AF022048	3804	19q13.4	Hs.512572	24	biological process unknown antigen binding receptor activity receptor activity molecular function unknown integral to plasma membrane immune response cellular component unknown membrane	Antigen processing and Natural killer cell mediated
											regulation of progression through cell cycle nucleotide binding protein-tyrosine kinase activity protein-tyrosine kinase activity protein binding	Regulation of actin cytoskeleton Epithelial cell signaling in Helicobacter pylori infection

206267_s_at	MATK	megakaryocyte-associated tyrosine kinase	1.78	19	-3728967	NM_002378	4145	19p13.3	Hs.631845	28	ATP binding soluble fraction protein amino acid phosphorylation protein amino acid phosphorylation intracellular signaling cascade mesoderm development cell proliferation positive regulation of cell proliferation transferase activity	
210890_x_at	KIR2DL1	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 1	1.78	19	59973076	U24078	3802	19q13.4	Hs.512572 Hs.643606	29	receptor activity receptor activity integral to plasma membrane integral to plasma membrane immune response immune response membrane integral to membrane negative regulation of natural killer cell activity HLA-C specific inhibitory MHC class I receptor activity	Antigen processing and Natural killer cell mediated
212843_at	NCAM1	neural cell adhesion molecule 1	1.77	11	112337367	AA126505	4684	11q23.1	Hs.503878	65	protein binding plasma membrane cell adhesion cell adhesion cell-cell signaling synaptic transmission nervous system development membrane integral to membrane cell differentiation GPI anchor binding	Cell adhesion molecules (CAMs)
211688_x_at	KIR3DL2	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2	1.75	19	60053740	AF263617	3812	19q13.4	Hs.512572	19	receptor activity integral to plasma membrane cellular defense response membrane	Antigen processing and Natural killer cell mediated
211397_x_at	KIR2DL2	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 2	1.74	19	164614	L76669	3803	19q13.4	Hs.643606	18	receptor activity integral to plasma membrane immune response membrane	Antigen processing and Natural killer cell mediated
1553681_a_at	PRF1	perforin 1 (pore forming protein)	1.74	10	-72027110	NM_005041	5551	10q22	Hs.2200	44	calcium ion binding cytosol virus-infected cell apoptosis transformed cell apoptosis cellular defense response pathogenesis membrane integral to membrane cytolysis hemolysis of host red blood cells	Natural killer cell mediated Type I diabetes mellitus
212599_at	AUTS2	autism susceptibility candidate 2	1.72	7	68702254	AK025298	26053	7q11.22	Hs.21631	5	biological process unknown serine-type endopeptidase inhibitor activity molecular function unknown cellular component unknown	

216676_x_at	KIR3DL3	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 3	1.68	19	59927795	AC006293	115653	19q13.42	Hs.512572	4		Antigen processing and presentation
216907_x_at	KIR3DL2	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2	1.65	19	60053740	X93596	3812	19q13.4	Hs.512572	19	receptor activity integral to plasma membrane cellular defense response membrane	Antigen processing and Natural killer cell mediated
205547_s_at	TAGLN	transgelin	1.58	11	116575249	NM_003186	6876	11q23.2	Hs.632099	18	actin binding muscle development muscle development	
208203_x_at	KIR2DS5	killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 5	1.57	19	240823	NM_014513	3810	19q13.4	Hs.643606	6	receptor activity integral to plasma membrane immune response membrane HLA-C specific inhibitory MHC class I receptor activity	Antigen processing and presentation
205291_at	IL2RB	interleukin 2 receptor, beta	1.55	22	-35851827	NM_000878	3560	22q13 22q13.1	Hs.474787	54	receptor activity hematopoietin/interferon-class (D200-domain) cytokine receptor activity interleukin-2 receptor activity plasma membrane integral to plasma membrane protein complex assembly signal transduction external side of plasma membrane cytokine and chemokine mediated signaling pathway positive regulation of survival gene product activity	Cytokine-cytokine receptor Jak-STAT signaling pathway
207419_s_at	RAC2	ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2)	1.55	22	-35951257	NM_002872	5880	22q13.1	Hs.517601	34	nucleotide binding GTPase activity protein binding GTP binding intracellular signal transduction small GTPase mediated signal transduction	MAPK signaling pathway Wnt signaling pathway NA Axon guidance Focal adhesion Adherens junction Natural killer cell mediated cytotoxicity B cell receptor signaling Fc epsilon RI signaling pathway Leukocyte transendothelial Regulation of actin cytoskeleton NA
214617_at	PRF1	perforin 1 (pore forming protein)	1.53	10	-72027110	AI445650	5551	10q22	Hs.2200	44	calcium ion binding cytosol virus-infected cell apoptosis transformed cell apoptosis cellular defense response pathogenesis membrane integral to membrane cytolysis hemolysis of host red blood cells	Natural killer cell mediated Type I diabetes mellitus
221267_s_at	FAM108A1	family with sequence similarity 108, member A1	1.52	19	-1827975	NM_031213	81926	19p13.3	Hs.465542	3		
242644_at	TMC8	transmembrane channel-like 8	1.51	17	73638463	BE676000	147138	17q25.3	Hs.592102	3	endoplasmic reticulum membrane integral to membrane	

228854_at			1.49			AI492388						
226796_at	LOC116236		1.49	17	-24912437	AI817418	116236	17q11.2	Hs.106510	3		
211410_x_at	KIR2DL5A	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic	1.49	19	229379	AF217487	57292	19p13.3	Hs.643606	8	receptor activity	Antigen processing and presentation Natural killer cell mediated
											transmembrane receptor activity receptor signaling protein activity protein binding cytoplasm plasma membrane cell surface receptor linked signal transduction membrane integral to membrane T cell receptor complex protein homodimerization activity	Natural killer cell mediated T cell receptor signaling
210031_at	CD247	CD247 molecule	1.48	1	-165666507	J04132	919	1q22-q23	Hs.156445	95		
208657_s_at	9-Sep	septin 9	1.47	17	72827743	AF142408	10801	17q25	Hs.440932	21		
221745_at	WDR68	WD repeat domain 68	1.46	17	58981553	BE538424	10238	17q23.3	Hs.410596	7	protein binding cytoplasm	
207313_x_at	KIR3DL2	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2	1.45	19	60053740	L76666	3812	19q13.4	Hs.512572	19	receptor activity integral to plasma membrane cellular defense response membrane	Antigen processing and Natural killer cell mediated
											nucleotide binding protein serine/threonine kinase activity ATP binding intracellular protein amino acid phosphorylation intracellular signaling cascade zinc ion binding transferase activity diacylglycerol binding	
38269_at	PRKD2	protein kinase D2	1.44	19	-51869413	AI_050147	25865	19q13.3	Hs.466987	14	metal ion binding	
217729_s_at	AES	amino-terminal enhancer of split	1.43	19	-3003907	NM_001130	166	19p13.3	Hs.515053	20	protein binding nucleus transcription regulation of transcription, DNA-dependent development organ morphogenesis Wnt receptor signaling pathway	
220646_s_at	KLRF1	killer cell lectin-like receptor subfamily F, member 1	1.43	12	9871343	NM_016523	51348	12p12.3-13.2	Hs.183125	4	sugar binding integral to plasma membrane cell surface receptor linked signal transduction membrane antimicrobial humoral response (sensu Vertebrata) MHC class I receptor activity	
											nucleic acid binding transcription factor activity intracellular nucleus transcription regulation of transcription, DNA-dependent zinc ion binding	

213639_s_at	ZNF500	zinc finger protein 500	1.42	16	-4740815	AI871396	26048	16p13.3	Hs.513316	6	metal ion binding nucleotide binding GTPase activity GTP binding immune response membrane	
238581_at	GBP5	guanylate binding protein 5	1.41	1	-89498852	BG271923	115362	1p22.2	Hs.513726	8	protein binding nucleus nuclear pore mRNA processing mRNA export from nucleus protein targeting protein transport membrane integral to membrane	
212316_at	NUP210	nucleoporin 210kDa	1.40	3	-13332736	AA502912	23225	3p25.1	Hs.475525	19	biological process unknown integral to membrane of membrane fraction structural constituent of ribosome ion channel activity molecular function unknown intracellular ribosome protein biosynthesis ion transport membrane integral to membrane	
213395_at	MLC1	megalencephalic leukoencephalopathy with subcortical cysts 1	1.40	22	-48839946	AL022327	23209	22q13.33	Hs.517729	26	gamma-Hexachlorocyclohexane degradation Bisphenol A degradation 1- and 2-Methylnaphthalene Benzoate degradation via CoA Ethylbenzene degradation Limonene and pinene	
202481_at	DHRS3	dehydrogenase/reductase (SDR family) member 3	1.40	1	-12550526	NM_004753	9249	1p36.1	Hs.289347	6	nucleotide binding visual perception metabolism electron carrier activity membrane integral to membrane oxidoreductase activity retinol metabolism	
225803_at	FBXO32	F-box protein 32	1.39	8	-124584539	AW006123	114907	8q24.13	Hs.403933	8	ubiquitin cycle	
225175_s_at	SLC44A2	solute carrier family 44, member 2	1.39	19	10597228	AI569503	57153	19p13.1	Hs.631631	8	signal transducer activity transport membrane integral to membrane positive regulation of I-kappaB kinase/NF-kappaB cascade	
205821_at	KLRK1	killer cell lectin-like receptor subfamily K,	1.38	12	-10416219	NM_007360	22914	12p13.2-p12.3	Hs.387787	47	Natural killer cell mediated cytotoxicity	
226401_at	PARP10	poly (ADP-ribose) polymerase family, member 10	1.37	8	-145123315	AL040631	84875	8q24.3	Hs.348609	10	nucleotide binding NAD+ ADP-ribosyltransferase activity nucleus protein amino acid ADP-ribosylation	
											transmembrane receptor activity lipid transporter activity integral to plasma membrane lipid metabolism lipid transport intracellular protein transport receptor mediated endocytosis steroid metabolism	

203509_at	SORL1	sortilin-related receptor, L(DLR class) A repeats-containing	1.36	11	120828129	NM_003105	6653	11q23.2-p24.2	Hs.368592	17	cholesterol metabolism protein transporter activity membrane	
211242_x_at	KIR2DL4	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 4	1.36	19	60006877, 199896	AF276292	3805	19q13.4	Hs.512572	30	receptor activity transmembrane receptor activity integral to plasma membrane cellular defense response signal transduction membrane	Antigen processing and Natural killer cell mediated
1552667_a_at 43511_s_at	SH2D3C	SH2 domain containing 3C	1.35	9	-129540845, -129540418	NM_005489	10044	9q34.11	Hs.306412	12	guanyl-nucleotide exchange factor intracellular intracellular signaling cascade small GTPase mediated signal transduction	
			1.35			AI201594					protein binding nucleus nuclear pore mRNA processing mRNA export from nucleus protein targeting protein transport membrane integral to membrane	
213947_s_at	NUP210	nucleoporin 210kDa	1.35	3	-13332736	AI867102	23225	3p25.1	Hs.475525	19		
221861_at			1.35			AI157484						
208198_x_at	KIR2DS1	killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 1	1.34	19	257787	NM_014512	3806	19q13.4	Hs.643606	17	transmembrane receptor activity immune response membrane integral to membrane	Antigen processing and Natural killer cell mediated
212256_at	GALNT10	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 10 (GalNAc-T10)	1.33	5	153763529, 153550487	BE906572	55568	5q33.2	Hs.432818 Hs.631797	7	polypeptide N-acetylgalactosaminyltransferase activity calcium ion binding sugar binding membrane integral to membrane transferase activity, transferring glycosyl groups manganese ion binding	O-Glycan biosynthesis Glycan structures - biosynthesis
212605_s_at			1.33			AK025759						
207416_s_at	NFATC3	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3	1.33	16	66676875	NM_004555	4775	16q22.2	Hs.632209	23	transcription factor activity transcription coactivator activity nucleus regulation of transcription, DNA-dependent regulation of transcription from RNA polymerase II promoter inflammatory response	Wnt signaling pathway NA Axon guidance Natural killer cell mediated cytotoxicity T cell receptor signaling pathway B cell receptor signaling
219566_at	PLEKHG1	pleckstrin homology domain containing, family F (with FYVE domain)	1.32	19	34847802	NM_024310	79156	19q12	Hs.466383	6		
221744_at	WDR68	WD repeat domain 68	1.31	17	58981553	AK026008	10238	17q23.3	Hs.410596	7	protein binding cytoplasm	
											binding nucleus DNA repair transcription	

202167_s_at	MMS19L	MMS19-like (MET18 homolog, <i>S. cerevisiae</i>)	1.30	10	-99208070	NM_022362	64210	10q24-q25	Hs.500721	10	regulation of transcription, DNA-dependent nucleotide binding GTP binding intracellular	
226598_s_at	GTPBP5	GTP binding protein 5 (putative)	1.30	20	60201647	AK001603	26164	20q13.33	Hs.340636	3	proteolysis peptidase activity	
222603_at	KIAA1815	KIAA1815	1.30	9	-5774571	AL136980	79956	9p24	Hs.591078	4	protein binding nucleus ubiquitin cycle apoptosis zinc ion binding ATP synthesis coupled proton transport proton-transporting two-sector ATPase complex ligase activity metal ion binding hydrogen-transporting ATP synthase activity, rotational mechanism hydrogen-transporting ATPase activity, rotational mechanism	
227065_at	TRIAD3		1.30	7	-5626203	AA523105	54476	7p22.1	Hs.487458	14	regulation of progression through cell cycle protein phosphatase type 2A complex inactivation of MAPK activity antigen binding binding protein binding soluble fraction nucleus mitochondrion cytosol regulation of DNA replication regulation of translation protein complex assembly protein amino acid dephosphorylation ceramide metabolism induction of apoptosis RNA splicing protein phosphatase type 2A regulator activity response to organic substance microtubule cytoskeleton membrane second-messenger-mediated signaling regulation of Wnt receptor signaling pathway regulation of cell adhesion negative regulation of cell growth regulation of growth negative regulation of tyrosine phosphorylation of Stat3 protein regulation of transcription regulation of cell differentiation protein heterodimerization activity	Wnt signaling pathway Tight junction Long-term depression
200695_at	PPP2R1A	protein phosphatase 2 (formerly 2A), regulatory subunit A (PR 65), alpha isoform	1.29	19	57385045	NM_014225	55118	19q13.33	Hs.467192	33	biological process unknown catalytic activity	

211818_s_at	PDE4C	phosphodiesterase 4C, cAMP-specific (phosphodiesterase E1 dunce homolog, Drosophila)	1.29	19	-18181521	U88712	5143	19p13.11	Hs.631628	12	3',5'-cyclic-nucleotide phosphodiesterase activity 3',5'-cyclic-nucleotide phosphodiesterase activity 3',5'-cyclic-AMP phosphodiesterase activity signal transduction cellular component unknown hydrolase activity
											Purine metabolism
1553713_a_at	RHEBL1	Ras homolog enriched in brain like 1	1.29	12	-47744734	NM_144593	121268	12q13.12	Hs.159013	7	nucleotide binding GTP binding intracellular small GTPase mediated signal transduction membrane
220142_at	HAPLN2	hyaluronan and proteoglycan link protein 2	1.29	1	154855709	NM_021817	60484	1q23.1	Hs.410719	6	hyaluronic acid binding extracellular matrix (sensu Metazoa) cell adhesion
213996_at	YPEL1	yippee-like 1 (Drosophila)	1.29	22	-20381825	NM_013313	29799	22q11.2	Hs.517436	6	nucleus
49111_at			1.28			N80935					
201349_at	SLC9A3R1	solute carrier family 9 (sodium/hydrogen exchanger), member 3 regulator 1	1.28	17	70256378	NM_004252	9368	17q25.1	Hs.396783	56	protein binding protein complex assembly actin cytoskeleton Wnt receptor signaling pathway sodium:hydrogen antiporter regulator activity beta-2 adrenergic receptor binding
227544_at			1.28			H07095	145225				
239810_at	VASH1	vasohibin 1	1.28	14	76298284	AU152507	22846	14q24.3	Hs.525479	5	cell cycle cell cycle arrest
1555724_s_at	TAGLN	transgelin	1.27	11	116575249	BC010946	6876	11q23.2	Hs.632099	18	actin binding muscle development muscle development
											NA Adipocytokine signaling
223438_s_at	PPARA	peroxisome proliferative activated receptor, alpha	1.27	22	44951326	BC004162	5465	22q12-q13.1	Hs.103110	124	transcription factor activity steroid hormone receptor activity receptor activity ligand-dependent nuclear receptor protein binding nucleus nucleus transcription regulation of transcription, DNA-dependent transcription from RNA polymerase II promoter lipid metabolism fatty acid metabolism zinc ion binding fatty acid transport positive regulation of fatty acid beta-oxidation sequence-specific DNA binding metal ion binding
211976_at			1.26			AK026168					
228880_at	LOC339984		1.26	4		AL041933	339984	4p16.3	Hs.592482		nucleic acid binding

201229_s_at	ARIH2	ariadne homolog 2 (Drosophila)		1.25	3	48931284	BC000422	10425	3p21.2-p21.3	Hs.31387	13
211245_x_at	KIR2DL4	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 4		1.25	19	60006877, 199896	AF002256	3805	19q13.4	Hs.512572	30
206582_s_at	GPR56	G protein-coupled receptor 56		1.25	16	56211458, 56220041, 56220022	NM_005682	9289	16q12.2-q21	Hs.513633	10
205331_s_at	REEP2	receptor accessory protein 2		1.25	5	137802674	NM_016606	51308	5q31	Hs.416090	9
216232_s_at	GCN1L1	GCN1 general control of amino-acid synthesis 1-		1.25	12	-119049398	AI697055	10985	12q24.2	Hs.298716	6
212068_s_at	KIAA0515	KIAA0515		1.25	9		AB011087	84726	9q34.13	Hs.495349	4
206178_at	PLA2G5	phospholipase A2, group V		1.25	1	20269424	NM_000929	5322	1p36-p34	Hs.319438	25
207741_x_at	TPSB2	tryptase beta 2		1.25	16	-1218337	NM_003293	64499	16p13.3	Hs.405479 Hs.592982	12
231194_at	CFL1	cofilin 1 (non-muscle)		1.25	11	-65378862	AW340085	1072	11q13	Hs.170622	60
223327_x_at	FLJ22795			1.25	15	489917,- 80937719, 80742015	AF316855	80154	15q25.2	Hs.498322 Hs.546614	2

212135_s_at	ATP2B4	ATPase, Ca++ transporting, plasma membrane 4	1.24	1	201862550	AW517686	493	1q32.1	Hs.343522	35	nucleotide binding magnesium ion binding calcium-transporting ATPase activity calcium ion binding calmodulin binding ATP binding plasma membrane integral to plasma membrane cation transport calcium ion transport metabolism hydrolase activity hydrolase activity, acting on acid anhydrides, catalyzing transmembrane movement of substances	Calcium signaling pathway
207184_at	SLC6A13	solute carrier family 6 (neurotransmitter transporter, GABA), member 13	1.24	12	-200051	NM_016615	6540	12p13.3	Hs.504398	3	neurotransmitter:sodium symporter activity gamma-aminobutyric acid:sodium symporter activity integral to plasma membrane neurotransmitter transport symporter activity membrane	
208426_x_at	KIR2DL4	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 4	1.24	19	60006877, 199896	NM_002255	3805	19q13.4	Hs.512572	30	receptor activity transmembrane receptor activity integral to plasma membrane cellular defense response signal transduction membrane	Antigen processing and Natural killer cell mediated
218765_at	SIDT2	SID1 transmembrane family, member 2	1.23	11	116555148	NM_015996	51092	11q23.3	Hs.410977	5	membrane integral to membrane	
227965_at	APC2	adenomatosis polyposis coli 2	1.23	19	1401147	BE262551	10297	19p13.3	Hs.446376	8	regulation of progression through cell cycle protein complex assembly signal transduction beta-catenin binding microtubule binding Wnt receptor signaling pathway catenin complex	Wnt signaling pathway Regulation of actin cytoskeleton NA
228917_at			1.23			AI798769						
229121_at			1.23			BE857553						
206873_at	CA6	carbonic anhydrase VI	1.23	1	8928508	NM_001215	765	1p36.2	Hs.100322	18	carbonate dehydratase activity carbonate dehydratase activity one-carbon compound metabolism zinc ion binding lyase activity metal ion binding	Nitrogen metabolism
229154_at	WNT10A	wingless-type MMTV integration site family, member 10A	1.23	2	219453498	AW873556	80326	2q35	Hs.121540	3	signal transducer activity extracellular region frizzled-2 signaling pathway development	Wnt signaling pathway Hedgehog signaling pathway
224342_x_at	IGLV1-44	immunoglobulin lambda variable 1-44	1.23	22		L14452	28823	22q11.2	Hs.449601	3		
		eukaryotic translation									protein binding regulation of translation eukaryotic initiation factor 4E binding negative regulation of protein	

224645_at	EIF4EBP2	initiation factor 4E binding protein 2	1.23	10	71833927	BG106477	1979	10q21-q22	Hs.594234 Hs.621200	12	negative regulation of translational initiation	
208858_s_at	FAM62A	family with sequence similarity 62 (C2 domain containing), member A	1.22	12	54808320	BC004998	23344	12q13.2	Hs.632729	5	membrane integral to membrane	
1559461_at	CEP72	centrosomal protein 72kDa	1.22	5	665404	BE870585	55722	5p15.33	Hs.591741	4		
241467_at	OSBPL5	oxysterol binding protein-like 5	1.22	11	-3064921	AW204093	114879	11p15.4	Hs.436166	8	cytosol lipid transport Golgi to plasma membrane transport oxysterol binding steroid metabolism cholesterol metabolism cholesterol transport	
											nucleotide binding GTPase activity GTP binding intracellular plasma membrane Ras protein signal transduction development muscle development actin cytoskeleton organization and biogenesis GTP-dependent protein binding	MAPK signaling pathway Axon guidance Tight junction Regulation of actin cytoskeleton
225185_at	MRAS	muscle RAS oncogene homolog	1.22	3	139574396	BF343625	22808	3q22.3	Hs.527021	16		
219135_s_at	LA16c-		1.22	16	-843638	AL515916	64788	16p13.3	Hs.71912	4		
212123_at	C10orf61	chromosome 10 open reading frame 61	1.22	10	-97413163	AL050022	26123	10q23.33	Hs.438991	4	membrane integral to membrane	
203683_s_at	VEGFB	vascular endothelial growth factor B	1.22	11	63758841	NM_003377	7423	11q13	Hs.78781	14	regulation of progression through cell cycle regulation of cell growth vascular endothelial growth factor receptor binding extracellular region signal transduction growth factor activity heparin binding cell proliferation positive regulation of cell proliferation membrane	Cytokine-cytokine receptor interaction mTOR signaling pathway Focal adhesion
220531_at	FLJ14126		1.21	2		NM_024849	79907	2p24.1	Hs.130593	1		
221752_at	SSH1	slingshot homolog 1 (Drosophila)	1.21	12	-107705098	AL041728	54434	12q24.11	Hs.199763	16	cellular morphogenesis actin binding protein tyrosine phosphatase activity cytoplasm cytoskeleton plasma membrane protein amino acid dephosphorylation protein tyrosine/serine/threonine phosphatase activity hydrolase activity actin cytoskeleton organization and biogenesis	Regulation of actin cytoskeleton
217044_s_at	PLEKHG3	pleckstrin homology domain containing, family G (with RhoGef domain) member 3	1.21	14	64240945	BC004298	26030	14q23.3	Hs.509637	2	Rho guanyl-nucleotide exchange factor activity intracellular regulation of Rho protein signal transduction	

210974_s_at	AP3D1	adaptor-related protein complex 3, delta 1 subunit	1.21	19	-2051987	AF130042	8943	19p13.3	Hs.512815	19	transporter activity binding Golgi apparatus eye pigment biosynthesis intracellular protein transport
1555062_s_at	GTPBP3	GTP binding protein 3 (mitochondrial)	1.21	19	17309378, 17309363	AY078987	84705	19p13.11	Hs.334885	11	
204821_at	BTN3A3	butyrophilin, subfamily 3, member A3	1.21	6	26548741	NM_006994	10384	6p21.3	Hs.167741	7	membrane integral to membrane
224893_at	DKFZP564J0863		1.20	11	-63153012	AA775408	25923	11q13.1	Hs.356719	3	GTPase activity GTP binding immune response
224049_at	KCNK17	potassium channel, subfamily K, member 17	1.20	6	-39374755	AF339912	89822	6p21.1	Hs.162282	5	voltage-gated ion channel activity potassium channel activity ion transport potassium ion transport membrane integral to membrane potassium ion binding
											Bile acid biosynthesis Glycerolipid metabolism
1553970_s_at	CEL	carboxyl ester lipase (bile salt-stimulated lipase)	1.20	9	134927185	BC042510	1056	9q34.3	Hs.533258	42	serine esterase activity sterol esterase activity sterol esterase activity sterol esterase activity triacylglycerol lipase activity triacylglycerol lipase activity cytoplasm endoplasmic reticulum lipid metabolism triacylglycerol metabolism triacylglycerol metabolism cholesterol catabolism cholesterol catabolism cholesterol catabolism heparin binding heparin binding fatty acid catabolism fatty acid catabolism lipid catabolism hydrolase activity hydrolase activity protein amino acid esterification protein amino acid esterification pancreatic juice secretion pancreatic juice secretion cholesterol absorption cholesterol absorption intestinal lipid catabolism intestinal lipid catabolism
221250_s_at	MXD3	MAX dimerization protein 3	1.20	5	-176666818	NM_031300	83463	5q35.3	Hs.631950	9	nucleus transcription regulator activity regulation of transcription
											Focal adhesion ECM-receptor interaction Regulation of actin cytoskeleton

209663_s_at	ITGA7	integrin, alpha 7	1.20	12	-54364622	AF072132	3679	12q13	Hs.524484 Hs.639559	25	integrin-mediated signaling pathway muscle development integrin complex regulation of cell shape membrane
240147_at	MGC11257		1.20	7	-1003168	AA830578	84310	7p22.3	Hs.116567	5	
235663_at			1.20			AI313160					
225906_at	NCF1	neutrophil cytosolic factor 1, (chronic granulomatous disease, autosomal 1)	1.20	7	-74210381	BG261385	4687	7q11.23	Hs.520943	71	GTPase activity protein binding protein binding GTP binding soluble fraction cytosol electron transport superoxide metabolism cellular defense response intracellular signaling cascade electron carrier activity phosphoinositide binding Leukocyte transendothelial migration
201072_s_at	SMARCC1	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 1	1.20	3	-47602390	AW152160	6599	3p23-p21	Hs.476179	27	chromatin DNA binding chromatin binding transcription coactivator activity protein binding nucleus nucleoplasm chromatin assembly or disassembly chromatin remodeling regulation of transcription from RNA polymerase II promoter SWI/SNF complex regulation of transcription positive regulation of transcription, DNA-dependent
223910_at	ERN2	endoplasmic reticulum to nucleus signalling 2	1.20	16	-23609197	AB047079	10595	16p12.2	Hs.592041	3	nucleotide binding magnesium ion binding endonuclease activity protein serine/threonine kinase activity ATP binding endoplasmic reticulum electron transport transcription regulation of transcription, DNA-dependent mRNA processing protein amino acid phosphorylation apoptosis induction of apoptosis membrane integral to membrane rRNA catabolism negative regulation of transcription transferase activity hydrolase activity endoribonuclease activity, producing 5'-phosphomonoesters DNA binding

226788_at	THAP11	THAP domain containing 11	1.19	16	66433713	AI436409	57215	16q22.1	Hs.632200	3	nucleus zinc ion binding metal ion binding	
238333_s_at	SPRN	shadow of prion protein homolog (zebrafish)	1.19	10	-135084068	AI355435	503542	10q26.3	Hs.64968 Hs.501578	5		
											calcium ion binding receptor guanylyl cyclase signaling pathway cell-cell signaling fluid secretion visual perception calcium sensitive guanylate cyclase activator activity response to stimulus	
207003_at	GUCA1B	guanylate cyclase activator 1B (retina)	1.19	6	-42259000	NM_002098	2979	6p21.1	Hs.446529	7	NA	
											inositol or phosphatidylinositol phosphatase activity nucleus protein amino acid dephosphorylation protein tyrosine/serine/threonine phosphatase activity integral to membrane phospholipid dephosphorylation	
39835_at	SBF1	SET binding factor 1	1.19	22	-49232101	U93181	6305	22q13.33	Hs.589924	10	nucleotide binding RNA binding phosphoinositide 5-phosphatase activity hydrolase activity	Inositol phosphate metabolism Phosphatidylinositol signaling
216180_s_at	SYNJ2	synaptojanin 2	1.19	6	158322906	AK026758	8871	6q25.3	Hs.434494	15		
1553843_at	C10orf67	chromosome 10 open reading frame 67	1.19	10	-23645526	NM_153714	256815	10p12.2	Hs.522360	1		
1563903_x_at	SPSB1	splA/ryanodine receptor domain and SOCS box containing 1	1.19	1	9275570	AK074468	80176	1p36.22	Hs.8261 Hs.637089	6	intracellular signaling cascade	
235160_at			1.18			BG105181						
											DNA binding intracellular nucleus transcription regulation of transcription_DNA-dependent zinc ion binding metal ion binding	
229140_at	ZNF579	zinc finger protein 579	1.18	19	-60780704	AI689676	163033	19q13.42	Hs.112529	3		
214667_s_at	TP53I11	tumor protein p53 inducible protein 11	1.17	11	-44537174	AK026607	9537	11p11.2	Hs.554791	8	response to stress negative regulation of cell proliferation	
											regulation of progression through cell cycle rhodopsin-like receptor activity receptor activity receptor binding Golgi apparatus plasma membrane integral to plasma membrane apoptosis caspase activation cell motility signal transduction G-protein coupled receptor protein signaling pathway tyrosine phosphorylation of STAT	Calcium signaling pathway Neuroactive ligand-receptor Complement and coagulation Regulation of actin cytoskeleton

206437_at	EDG6	endothelial differentiation, lysophosphatidic acid G-protein-coupled receptor, 6	1.16	19	3129765	NM_003775	8698	19p13.3	Hs.73797	15	G-protein coupled receptor protein signaling pathway phospholipase C activation elevation of cytosolic calcium ion concentration lipid binding membrane	Neuroactive ligand-receptor interaction
206517_at	CDH16	cadherin 16, KSP-cadherin	1.16	16	-65499526	NM_004062	1014	16q22.1	Hs.513660	13	calcium ion binding protein binding cell adhesion homophilic cell adhesion membrane integral to membrane	
232813_s_at	LOC653625		1.16	15		AI073403	653625	15q24.1	Hs.458315			
207889_at	SARDH	sarcosine dehydrogenase	1.16	9	-135518506	NM_007101	1757	9q33-q34	Hs.198003	8	biological process unknown aminomethyltransferase activity cytoplasm mitochondrion mitochondrial matrix electron transport glycine catabolism sarcosine dehydrogenase activity sarcosine dehydrogenase activity electron carrier activity oxidoreductase activity	Urea cycle and metabolism of amino groups Glycine, serine and threonine
219143_s_at	RPP25	ribonuclease P 25kDa subunit	1.15	15	-73034495	NM_017793	54913	15q24.1	Hs.8562	4	RNA binding ribonuclease P activity protein binding nucleus tRNA processing hydrolase activity	
238339_x_at	LRIG1	leucine-rich repeats and immunoglobulin-like	1.15	3	-66511911	AI356774	26018	3p14	Hs.518055	10	membrane integral to membrane	
209976_s_at	CYP2E1	cytochrome P450, family 2, subfamily E, polypeptide 1	1.15	10	135190856	AF182276	1571	10q24.3-qter	Hs.12907	72	monooxygenase activity iron ion binding endoplasmic reticulum microsome electron transport membrane oxygen binding heme binding metal ion binding unspecific monooxygenase activity	Arachidonic acid metabolism Linoleic acid metabolism Metabolism of xenobiotics by cytochrome P450
232078_at	TOMM40	translocase of outer mitochondrial membrane 40 homolog (yeast)	1.15	19	50086333	BE867789	10452	19q13	Hs.110675	10	molecular function unknown mitochondrion mitochondrial outer membrane protein targeting to mitochondrion anion transport mitochondrial transport voltage-gated ion-selective channel activity protein transport membrane integral to membrane outer membrane	

1554110_at	CDCP1	CUB domain containing protein 1	1.15	-45098773, -345126736	BC021099	64866	3p21.31	Hs.476093	14	membrane integral to membrane		
205170_at	STAT2	signal transducer and activator of transcription 2, 113kDa	1.14	12	-55021650	NM_005419	6773	12q13.2	Hs.530595	50	transcription factor activity signal transducer activity hematopoietin/interferon-class (D200-domain) cytokine receptor signal transducer activity calcium ion binding nucleus transcription regulation of transcription from RNA polymerase II promoter intracellular signaling cascade JAK-STAT cascade response to virus	Jak-STAT signaling pathway
243776_at			1.13			AW139582						
214809_at			1.12			AI050047						
233113_at			1.11			AU147726						
1567681_at	SNORA74A	small nucleolar RNA, H/ACA box 74A	1.10	5		X94290	26821	5q31.2	Hs.268939	2		
244230_at	MEF2C	MADS box transcription enhancer factor 2, polypeptide C (myocyte enhancer factor 2C)	0.89	5	-88051921	AW263527	4208	5q14	Hs.444409	41	transcription factor activity RNA polymerase II transcription factor activity transcription coactivator activity nucleus transcription regulation of transcription, DNA-dependent transcription from RNA polymerase II promoter nervous system development muscle development sequence-specific DNA binding	MAPK signaling pathway
215272_at			0.88			R59977						
207434_s_at	FXYD2	FXYD domain containing ion transport regulator 2	0.88	11	-117195999	NM_021603	486	11q23	Hs.413137	18	transporter activity ion channel activity ion channel activity sodium:potassium-exchanging ATPase activity sodium:potassium-exchanging ATPase complex ion transport ion transport potassium ion transport sodium ion transport membrane integral to membrane potassium ion binding sodium ion binding	
235099_at	CMTM8	CKLF-like MARVEL transmembrane domain containing 8	0.87	3	32255174	AW080832	152189	3p22.3	Hs.154986	3	cytokine activity extracellular space chemotaxis membrane integral to membrane	
238123_at			0.86			W52448						
										arachidonate 5-lipoxygenase activity iron ion binding	Arachidonic acid metabolism Linoleic acid metabolism	

213952_s_at	ALOX5	arachidonate 5-lipoxygenase	0.86	10	45189634	AI372974	240	10q11.2	Hs.89499	68	calcium ion binding protein binding electron transport inflammatory response lipoxygenase activity oxidoreductase activity leukotriene biosynthesis	
200690_at	HSPA9B	heat shock 70kDa protein 9B (mortalin-2)	0.86	5	-137918923	AA927701	3313	5q31.1	Hs.184233	36	nucleotide binding ATP binding cytoplasm mitochondrion protein folding anti-apoptosis cell surface unfolded protein binding	MAPK signaling pathway Antigen processing and
											ErbB-2 class receptor binding ErbB-2 class receptor binding integrin binding integrin binding structural constituent of cytoskeleton structural constituent of cytoskeleton protein binding protein binding nucleus nucleus cytoplasm cytoplasm cell cycle cell cycle cell adhesion cell adhesion epidermal growth factor receptor signaling pathway epidermal growth factor receptor signaling pathway integrin-mediated signaling pathway integrin-mediated signaling pathway cell growth cell growth hemidesmosome hemidesmosome intermediate filament cytoskeleton organization and biogenesis intermediate filament cytoskeleton organization and biogenesis basal protein localization basal protein localization establishment and/or maintenance of epithelial cell polarity establishment and/or maintenance of epithelial cell polarity	
234125_at	ERBB2IP	erbb2 interacting protein	0.86	5	65258139	AI137318	55914	5q12.3	Hs.591774	26		
230246_at	PLAC9	placenta-specific 9	0.86	10	81882237	AI275020	219348	10q22.3	Hs.204947	2	protein binding nucleus proteolysis peptidase activity zinc ion binding	

239554_at	RNF13	ring finger protein 13	0.85	3	151013193	AI634646	11342	3q25.1	Hs.12333	5	metal ion binding	
214766_s_at	AHCTF1	AT hook containing transcription factor 1	0.85	1	-245069026	AL080144	25909	1q44	Hs.300887 Hs.470435	3		
219781_s_at	ZNF771	zinc finger protein 771	0.85	16	30326977	AI992095	51333	16p11.2	Hs.148584	1	nucleic acid binding intracellular nucleus zinc ion binding metal ion binding	
216547_at	LOC127406		0.85	1		AL353681	127406	1p32.2			structural constituent of ribosome intracellular protein biosynthesis small ribosomal subunit	
223527_s_at	CDADC1	cytidine and dCMP deaminase domain	0.84	13	48720103	AL138875	81602	13q14.2	Hs.388220	1	zinc ion binding hydrolase activity	
240834_at	FAM105B	family with sequence similarity 105, member B	0.84	5	14731835	AI813337	90268	5p15.2	Hs.406335 Hs.591743	6		
206611_at	C2orf27	chromosome 2 open reading frame 27	0.84	2	132196533	NM_013310	29798	2q21.1-q21.2	Hs.635289	3		
237287_at	WDR34	WD repeat domain 34	0.83	9	-130435760	AW450386	89891	9q34.11	Hs.495240	1		
216925_s_at	TAL1	T-cell acute lymphocytic leukemia 1	0.83	1	-47454550	X51990	6886	1p32	Hs.73828	44	DNA binding nucleus regulation of transcription, DNA-dependent cell proliferation cell differentiation transcription regulator activity regulation of transcription	
212780_at	SOS1	son of sevenless homolog 1 (Drosophila)	0.83	2	-39066469	AA700167	6654	2p22-p21	Hs.278733	58	DNA binding Ras guanyl-nucleotide exchange factor activity Rho guanyl-nucleotide exchange factor activity Rho GTPase activator activity protein binding intracellular signal transduction Ras protein signal transduction regulation of Rho protein signal transduction Regulation of actin cytoskeleton Insulin signaling pathway NA NA	MAPK signaling pathway Dorso-ventral axis formation Focal adhesion Gap junction Jak-STAT signaling pathway Natural killer cell mediated T cell receptor signaling Fc epsilon RI signaling pathway Regulation of actin cytoskeleton Insulin signaling pathway NA NA
											DNA strand annealing activity transcription factor activity transcription factor activity nuclease activity copper ion binding protein binding ATP binding insoluble fraction nucleus nucleus nucleoplasm nucleolus cytoplasm mitochondrion base-excision repair	MAPK signaling pathway Cell cycle Apoptosis Wnt signaling pathway Amyotrophic lateral sclerosis Huntington's disease NA

205486_at	TESK2	testis-specific kinase 2	0.82	1	-45582141	NM_007170	10420	1p32	Hs.591499	6	spermatogenesis transferase activity actin cytoskeleton organization and biogenesis manganese ion binding focal adhesion formation
1553220_at	ALS2CR13	amyotrophic lateral sclerosis 2 (juvenile) chromosome region,	0.82	2	203208455	NM_173511	150864	2q33.1	Hs.471130	3	
1554105_at	FAM11A	family with sequence similarity 11, member A	0.81	X	-148486015	BC022405	84548	Xq28	Hs.522172	4	membrane integral to membrane
1556721_at	FLJ33706		0.81	20		AK091025	284805	20q11.21	Hs.629708	3	
208972_s_at	ATP5G1	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit C1 (subunit 9)	0.81	17	44325146	AL080089	516	17q21.32	Hs.80986	11	transporter activity membrane fraction mitochondrion proton-transferring ATP synthase complex (sensu Eukaryota) ion transport lipid binding ATP synthesis coupled proton transport proton transport membrane proton-transferring two-sector ATPase complex proton-transferring ATP synthase complex, coupling factor F(o) hydrogen-transferring ATP synthase activity, rotational mechanism hydrogen-transferring ATPase activity, rotational mechanism
229955_at	FBXO3	F-box protein 3	0.81	11	-33719067, -33724868	AW772096	26273	11p13	Hs.406787	6	ubiquitin ligase complex ubiquitin conjugating enzyme activity ubiquitin-protein ligase activity ubiquitin-protein ligase activity proteolysis ubiquitin cycle protein ubiquitination
210427_x_at	ANXA2	annexin A2	0.80	15	-58426643	BC001388	302	15q21-q22	Hs.511605	85	skeletal development phospholipase inhibitor activity phospholipase inhibitor activity calcium ion binding calcium-dependent phospholipid binding soluble fraction plasma membrane cytoskeletal protein binding
232122_s_at	VEPH1	ventricular zone expressed PH domain homolog 1	0.80	3	-158461391	AK022666	79674	3q24-q25	Hs.127657	7	
224898_at	WDR26	WD repeat domain 26	0.80	1	-222639816	BG177759	80232	1q42.11	Hs.497873	3	
204929_s_at	VAMP5	vesicle-associated membrane protein 5 (myobrevin)	0.80	2	85665041	NM_006634	10791	2p11.2	Hs.172684	5	plasma membrane striated muscle development integral to membrane vesicle-mediated transport cell differentiation
222497_x_at	NMD3	NMD3 homolog (S. cerevisiae)	0.79	3	162421792	AL520719	51068	3q26.1	Hs.91384	9	
89948_at	C20orf67	chromosome 20 open reading frame 67	0.79	20	43996723	AI743331	63935	20q13.12	Hs.472856	7	nucleus transcription factor activity

214482_at	ZBTB25	zinc finger and BTB domain containing 25	0.78	14	-64023309	NM_006977	7597	14q23-q24	Hs.435974	8
229344_x_at	FAM80B	family with sequence similarity 80, member B	0.78	12	8725553	AW135012	57494	12p13.31	Hs.504670	2
229602_at			0.78			H97567				
211030_s_at	SLC6A6	solute carrier family 6 (neurotransmitter transporter, taurine), member 6	0.77	3	14419109	BC006252	6533	3p25-p24	Hs.529488	14
204435_at	NUPL1	nucleoporin like 1	0.77	13	24773665	NM_014778	9818	13q12.13	Hs.310453 Hs.507537	10
1553736_at	PSRC2	proline-serine-rich coiled-coil 2	0.76	12	-70289650	NM_144982	196441	12q21.1	Hs.527874	2
217911_s_at	BAG3	BCL2-associated athanogene 3	0.76	10	121400871	NM_004281	9531	10q25.2-q26.2	Hs.643507	19
203124_s_at	SLC11A2	solute carrier family 11 (proton-coupled divalent metal ion transporters), member 2	0.76	12	-49666043	NM_000617	4891	12q13	Hs.505545	33
235587_at	LOC202781		0.76	7		BG400596	202781	7q36.3	Hs.193172	1
1553099_at	TIGD1	tigger transposable element derived 1	0.76	2	-233121022	NM_145702	200765	2q37.1	Hs.211823	4
218023_s_at	FAM53C	family with sequence similarity 53, member C	0.76	5	137701866	NM_016605	51307	5q31	Hs.54056	5
224831_at	CPEB4	cytoplasmic polyadenylation element	0.75	5	173248794	BE620832	80315	5q21	Hs.127126	3
										regulation of progression through cell cycle nuclear mRNA splicing, via spliceosome

230443_at	NHP2L1	NHP2 non-histone chromosome protein 2-like 1 (<i>S. cerevisiae</i>)	0.75	22	-40399883	AI288202	4809	22q13.2-p13.31	Hs.182255	14	RNA binding nucleus spliceosome complex nucleolus ribosome biogenesis and assembly
223251_s_at	ANKRD10	ankyrin repeat domain 10	0.75	13	-110328888	BC001727	55608	13q34	Hs.525163	2	
223368_s_at	C9orf32	chromosome 9 open reading frame 32	0.75	9	131428255	BC001396	28989	9q34.11	Hs.522433	2	protein binding
201088_at	KPNA2	karyopherin alpha 2 (RAG cohort 1, importin alpha 1)	0.75	-1713111, 1763462309		NM_002266	3838	17q23.1-q23.3	Hs.594238	99	regulation of DNA recombination M phase specific microtubule process G2 phase of mitotic cell cycle protein binding nucleus nucleoplasm cytoplasm DNA metabolism NLS-bearing substrate import into intracellular protein transport nuclear localization sequence binding protein transporter activity
220987_s_at	NUAK2	NUAK family, SNF1-like kinase, 2	0.75	1	-203537813	NM_030952	81788	1q32.1	Hs.497512	10	
1552542_s_at	TAGAP	T-cell activation GTPase activating protein	0.75	-159376015,- 6159379931		NM_138810	117289	6q25.3	Hs.529984	3	guanyl-nucleotide exchange factor intracellular signal transduction
228238_at	CENPL	centromere protein L	0.75	1	-172035639	AW105301	91687	1q25.1	Hs.531856	4	
225179_at			0.75			AA161140					
233899_x_at	ZBTB10	zinc finger and BTB domain containing 10	0.74	8	81561002	AK024296	65986	8q13-q21.1	Hs.591868	2	DNA binding protein binding intracellular nucleus transcription regulation of transcription, DNA-dependent zinc ion binding metal ion binding
225768_at	NR1D2	nuclear receptor subfamily 1, group D, member 2	0.74	3	23961809	AI761621	9975	3p24.2	Hs.37288	10	transcription factor activity steroid hormone receptor activity nucleus transcription regulation of transcription, DNA-dependent zinc ion binding sequence-specific DNA binding metal ion binding
209005_at	FBXL5	F-box and leucine-rich repeat protein 5	0.74	4	-15215251	AF157323	26234	4p15.33	Hs.643433	9	ubiquitin ligase complex ubiquitin-protein ligase activity protein ubiquitination
239186_at	MGC39372	choroideremia-like (Rab)	0.74	6		AI347139	221756	6p25.2	Hs.8162	1	Rab-protein geranylgeranyltransferase activity Rab escort protein activity GTPase activator activity Rab-protein geranylgeranyltransferase complex intracellular protein transport visual perception

226350_at	CHML	escort protein 2)	0.73	1	-239858790	AU155565	1122	1q42-qter	Hs.534399	12	regulation of GTPase activity		
201077_s_at	NHP2L1	NHP2 non-histone chromosome protein 2-like 1 (S. cerevisiae)	0.73	22	-40399883	AF155235	22q13.2-	4809	q13.31	Hs.182255	14	regulation of progression through cell cycle nuclear mRNA splicing, via spliceosome RNA binding nucleus spliceosome complex nucleolus ribosome biogenesis and assembly	
235982_at	FCRL1	Fc receptor-like 1	0.72	1	-156031277	AA677057	115350	1q21-q22	Hs.374126	6	receptor activity		
1568733_at	C10orf76	chromosome 10 open reading frame 76	0.72	10	-103595345	BC032118	79591	10q24.32	Hs.16004	2			
225478_at			0.72			BE783723							
210054_at	C4orf15	chromosome 4 open reading frame 15	0.71	4	-2199893	BC003648	79441	4p16.3	Hs.632582	2			
213019_at	RANBP6	RAN binding protein 6	0.70	9	-6001019	AI123233	26953	9p24.1	Hs.167496	2	binding nucleus protein transport		
244103_at	C1orf55	chromosome 1 open reading frame 55	0.69	1	-224237030	AW963092	163859	1q42.12	Hs.520192	2			
225265_at	RBMS1	RNA binding motif, single stranded interacting protein 1	0.68	2	-160838760	AI580100	5937	2q24.2	Hs.369265 Hs.470412	10	nucleotide binding DNA binding double-stranded DNA binding double-stranded DNA binding single-stranded DNA binding single-stranded DNA binding RNA binding RNA binding nucleus nucleus DNA replication DNA replication RNA processing regulation of translation cellular component unknown		
229157_at	KCNH2	potassium voltage-gated channel, subfamily H (eag-related), member 2	0.67		-150272981, -7150277447	AI949265	3757	7q35-q36	Hs.438823	100	two-component sensor activity two-component signal transduction system (phosphorelay) delayed rectifier potassium channel activity membrane fraction regulation of transcription, DNA-dependent ion transport potassium ion transport muscle contraction sensory perception of sound regulation of heart contraction voltage-gated potassium channel membrane integral to membrane potassium ion binding		
239835_at	KBTBD8	kelch repeat and BTB (POZ) domain containing	0.67	3	67132092	AA669114	84541	3p14	Hs.116665	3	protein binding		
212723_at	PTDSR	phosphatidylserine receptor	0.67	17	-72224004	AK021780	23210	17q25	Hs.514505	10	nucleus cell differentiation		
230304_at			0.67			AW005298							

240369_at	TTC7A	tetratricopeptide repeat domain 7A	0.66	2	47021816	AW195569	57217	2p21	Hs.370603	3	binding SH3/SH2 adaptor activity intracellular protein transport signal transduction	
203544_s_at	STAM	signal transducing adaptor molecule (SH3 domain and ITAM motif) 1	0.66	10	17726129	NM_003473	8027	10p14-p13	Hs.441498	24	nucleotide binding protein serine/threonine kinase activity ATP binding nucleus protein amino acid phosphorylation apoptosis induction of apoptosis protein kinase cascade	Jak-STAT signaling pathway
243797_at	STK17B	serine/threonine kinase 17b (apoptosis-inducing)	0.65	2	-196710102	AW070323	9262	2q32.3	Hs.88297	6	transferase activity	
212681_at	EPB41L3	erythrocyte membrane protein band 4.1-like 3	0.65	18	-5382387	AI770004	23136	18p11.32	Hs.213394	31	biological process unknown actin binding structural molecule activity binding cytoplasm cytoskeleton plasma membrane intercellular junction cortical actin cytoskeleton organization and biogenesis	Tight junction
235593_at	ZFHX1B	zinc finger homeobox 1b	0.64	2	-144862053	AL546529	9839	2q22	Hs.34871	28	transcription factor activity intracellular nucleus regulation of transcription, DNA-dependent nervous system development zinc ion binding negative regulation of transcription transcriptional repressor activity phosphatase regulator activity sequence-specific DNA binding SMAD binding metal ion binding	
202988_s_at	RGS1	regulator of G-protein signalling 1	0.64	1	190811479	NM_002922	5996	1q31	Hs.75256	17	signal transducer activity GTPase activator activity calmodulin binding plasma membrane immune response signal transduction G-protein signaling, adenylate cyclase inhibiting pathway negative regulation of signal	
209273_s_at	HBLD2	HESB like domain containing 2	0.63	9	-88069283	BG387555	81689	9q21.33	Hs.449291	5	iron ion binding molecular function unknown mitochondrion metal ion binding iron-sulfur cluster binding	
227577_at	EXOC8	exocyst complex component 8	0.63	1	-229535105	AI168350	149371	1q42.2	Hs.356198	12	protein binding exocytosis protein transport	
											microtubule motor activity protein binding microtubule	

229106_at	DYNLL2	dynein, light chain, LC8-type 2	0.63	17	53515797	AA401429	140735	17q22	Hs.591176	11	microtubule-based process myosin dynein complex intracellular transport	
202146_at	IFRD1	interferon-related developmental regulator 1	0.62	7	111850461, 111877750	AA747426	3475	7q22-q31	Hs.7879	12	binding myoblast cell fate determination cell differentiation	
222309_at	C6orf62	chromosome 6 open reading frame 62	0.62	6	-24813145	AW972292	81688	6p22.2	Hs.519930	3	biological process unknown molecular function unknown cellular component unknown	
219557_s_at	NRIP3	nuclear receptor interacting protein 3	0.61	11	-8960968	NM_020645	56675	11p15.3	Hs.523467	3		
1556874_a_at	RKHD2	ring finger and KH domain containing 2	0.61	18	-46954919	BC032952	51320	18q21.2	Hs.465144	2		
228702_at	FLJ43663		0.61	7		AL569506	378805	7q32.3	Hs.150556	2		
202558_s_at	STCH	stress 70 protein chaperone, microsome-associated, 60kDa	0.60	21	-14665309	NM_006948	6782	21q11.1 21q11	Hs.352341	12	nucleotide binding ATP binding endoplasmic reticulum microsome	
202637_s_at	ICAM1	intercellular adhesion molecule 1 (CD54), human rhinovirus receptor	0.60	19	10242778	AI608725	3383	19p13.3-p13.2	Hs.643447	239	transmembrane receptor activity protein binding plasma membrane integral to plasma membrane cell-cell adhesion	Cell adhesion molecules Natural killer cell mediated Leukocyte transendothelial
226650_at	MGC11257		0.60	7	-1003168	AI984061	84310	7p22.3	Hs.116567	5		
231863_at	ING3	inhibitor of growth family, member 3	0.60	7	120378052	AF161419	54556	7q31	Hs.489811	11	regulation of cell growth protein binding nucleus transcription regulation of transcription, DNA-dependent zinc ion binding chromatin modification metal ion binding	
228999_at	CHD2	chromodomain helicase DNA binding protein 2	0.59	15	91244422	AW514564	1106	15q26	Hs.220864	5	nucleotide binding chromatin DNA binding chromatin binding ATP-dependent DNA helicase activity ATP binding nucleus chromatin assembly or disassembly regulation of transcription from RNA polymerase II promoter chromosome organization and biogenesis (sensu Eukaryota) hydrolase activity regulation of transcription	
206420_at	IGSF6	immunoglobulin superfamily, member 6	0.58	16	-21560106	NM_005849	10261	16p12-p13	Hs.530902	6	transmembrane receptor activity integral to plasma membrane immune response cell surface receptor linked signal transduction	
											rhodopsin-like receptor activity receptor activity integral to plasma membrane signal transduction	

205220_at	GPR109B	G protein-coupled receptor 109B	0.58	12	-121765256	NM_006018	8843	12q24.31	Hs.458425	6	G-protein coupled receptor protein signaling pathway membrane purinergic nucleotide receptor activity. G-protein coupled
218936_s_at	CCDC59	coiled-coil domain containing 59	0.58	12	-81270750	NM_014167	29080	12q21.31	Hs.582627	3	
230048_at	IFRD1	interferon-related developmental regulator 1	0.58	7	111850461, 111877750	BF061555	3475	7q22-q31	Hs.7879	12	binding myoblast cell fate determination cell differentiation
1568768_s_at	BRE	brain and reproductive organ-expressed (TNFRSF1A modulator)	0.57		27967060, 227966985	AW080339	9577	2p23.2	Hs.11916 Hs.258314	13	nuclear ubiquitin ligase complex peroxisome targeting sequence binding tumor necrosis factor receptor binding protein binding nucleus cytoplasm ubiquitin cycle apoptosis response to DNA damage stimulus positive regulation of anti-apoptosis
209795_at	CD69	CD69 molecule	0.55	12	-9796352	L07555	969	12p13-p12	Hs.208854	31	transmembrane receptor activity sugar binding integral to plasma membrane defense response cell surface receptor linked signal transduction membrane
212434_at	GRPEL1	GrpE-like 1, mitochondrial (E. coli)	0.55	4	-7112680	AI984421	80273	4p16	Hs.443723	5	adenyly-nucleotide exchange factor mitochondrion mitochondrial matrix protein folding protein import into mitochondrial matrix protein homodimerization activity unfolded protein binding chaperone binding
212998_x_at	HLA-DQB1	major histocompatibility complex, class II, DQ beta 1	0.54		-3813334, - 64009260	AI583173	3119	6p21.3	Hs.409934 Hs.534322	129	immune response immune response membrane membrane integral to membrane antigen presentation, exogenous antigen processing, exogenous antigen via MHC class II MHC class II receptor activity MHC class II receptor activity
											Cell adhesion molecules Antigen processing and Type I diabetes mellitus
											MAPK signaling pathway NA Axon guidance Focal adhesion Adherens junction Tight junction T cell receptor signaling Leukocyte transendothelial Regulation of actin cytoskeleton NA

214230_at	CDC42	cell division cycle 42 (GTP binding protein, 25kDa)	0.53	1	22251706	R37664	998	1p36.1	Hs.597524	171	establishment and/or maintenance of cell polarity small GTPase mediated signal transduction membrane actin cytoskeleton organization and biogenesis filopodium macrophage differentiation positive regulation of pseudopodium formation negative regulation of protein complex assembly cell division G1 phase	Epithelial cell signaling in Helicobacter pylori infection NA NA	
218723_s_at	RGC32		0.53	13	40929711	NM_014059	28984	13q14.11	Hs.507866	7			
227697_at	SOCS3	suppressor of cytokine signaling 3	0.52	17	-73864458	AJ244908	9021	17q25.3	Hs.527973	64	regulation of cell growth protein kinase inhibitor activity anti-apoptosis intracellular signaling cascade JAK-STAT cascade negative regulation of signal	Jak-STAT signaling pathway Insulin signaling pathway Adipocytokine signaling Type II diabetes mellitus	
211654_x_at	HLA-DQB1	major histocompatibility complex, class II, DQ beta 1	0.51	-3813334, -64009260		M17565	3119	6p21.3	Hs.409934 Hs.534322	129	immune response membrane integral to membrane antigen presentation, exogenous antigen processing, exogenous antigen via MHC class II MHC class II receptor activity MHC class II receptor activity	Cell adhesion molecules Antigen processing and Type I diabetes mellitus	
213537_at	HLA-DPA1	major histocompatibility complex, class II, DP alpha 1	0.49	-33140771, -4219191, -64413300		AJ128225	3113	6p21.3	Hs.347270	29	integral to plasma membrane immune response membrane antigen presentation, exogenous antigen processing, exogenous antigen via MHC class II MHC class II receptor activity MHC class II receptor activity	Cell adhesion molecules Antigen processing and Type I diabetes mellitus	
226370_at	KLHL15	kelch-like 15 (Drosophila)	0.49	X	-23915883	BG149487	80311	Xp22.1-p21	Hs.495854	3	protein binding		
216834_at	RGS1	regulator of G-protein signalling 1	0.45	1	190811479	S59049	5996	1q31	Hs.75256	17	signal transducer activity GTPase activator activity calmodulin binding plasma membrane immune response signal transduction G-protein signaling, adenylate cyclase inhibiting pathway negative regulation of signal		
											integral to plasma membrane immune response membrane integral to membrane antigen presentation, exogenous	Cell adhesion molecules Antigen processing and Type I diabetes mellitus	

236203_at	HLA-DQA1	major histocompatibility complex, class II, DQ alpha 1	0.38	6	32713160	AI377755	3117	6p21.3	Hs.387679	70	antigen processing, exogenous antigen via MHC class II MHC class II receptor activity MHC class II receptor activity MHC class II receptor activity
206157_at	PTX3	pentraxin-related gene, rapidly induced by IL-1	0.35	3	158637300	NM_002852	5806	3q25	Hs.591286	28	extracellular region inflammatory response
											Cell adhesion molecules Antigen processing and Type I diabetes mellitus
212999_x_at	HLA-DQB1	major histocompatibility complex, class II, DQ beta 1	0.35	-3813334, -64009260		AW276186	3119	6p21.3	Hs.409934 Hs.534322	129	integral to membrane antigen presentation, exogenous antigen processing, exogenous antigen via MHC class II MHC class II receptor activity MHC class II receptor activity
											Cell adhesion molecules Antigen processing and Type I diabetes mellitus
213831_at	HLA-DQA1	major histocompatibility complex, class II, DQ alpha 1	0.31	6	32713160	X00452	3117	6p21.3	Hs.387679	70	integral to plasma membrane immune response immune response membrane integral to membrane antigen presentation, exogenous antigen processing, exogenous antigen via MHC class II MHC class II receptor activity MHC class II receptor activity MHC class II receptor activity
											Cell adhesion molecules Antigen processing and Type I diabetes mellitus
209480_at	HLA-DQB1	major histocompatibility complex, class II, DQ beta 1	0.28	-3813334, -64009260		M16276	3119	6p21.3	Hs.409934 Hs.534322	129	immune response immune response membrane membrane integral to membrane antigen presentation, exogenous antigen processing, exogenous antigen via MHC class II MHC class II receptor activity MHC class II receptor activity
											Cell adhesion molecules Antigen processing and Hematopoietic cell lineage Type I diabetes mellitus
238900_at	HLA-DRB1	major histocompatibility complex, class II, DR beta 1	0.22	6	-32654526	BE669692	3123	6p21.3	Hs.534322	213	immune response immune response membrane membrane integral to membrane antigen presentation, exogenous antigen processing, exogenous antigen via MHC class II MHC class II receptor activity MHC class II receptor activity

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Supplemental Material, Table 2. Listing of all urinary arsenic SAM-selected probes.

Probe	Symbol	Description	Chromosome	Chromosome Location	GenBank	LocusLink	Cytoband	UniGene	PubMed	Gene Ontology	Pathway
203290_at	HLA-DQA1	major histocompatibility complex, class II, DQ alpha 1	6	32713160	NM_002122	3117	6p21.3	Hs.387679	70	integral to plasma membrane immune response membrane integral to membrane antigen presentation, exogenous antigen processing, exogenous antigen via MHC class II MHC class II receptor activity MHC class II receptor activity MHC class II receptor activity	Cell adhesion molecules Antigen processing and Type I diabetes mellitus
207314_x_at	KIR3DL2	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2	19	60053740	NM_006737	3812	19q13.4	Hs.512572	19	receptor activity integral to plasma membrane cellular defense response membrane	Antigen processing and Natural killer cell mediated
211389_x_at	KIR3DL1	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 1	19	59989604	U73396	3811	19q13.4	Hs.512572 Hs.643606	32	receptor activity receptor activity integral to plasma membrane immune response immune response membrane natural killer cell activation negative regulation of natural killer cell activity MHC class I receptor activity HLA-B specific inhibitory MHC class I receptor activity HLA-B specific inhibitory MHC class I receptor activity	Antigen processing and Natural killer cell mediated
211688_x_at	KIR3DL2	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2	19	60053740	AF263617	3812	19q13.4	Hs.512572	19	receptor activity integral to plasma membrane cellular defense response membrane	Antigen processing and Natural killer cell mediated
216907_x_at	KIR3DL2	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2	19	60053740	X93596	3812	19q13.4	Hs.512572	19	receptor activity integral to plasma membrane cellular defense response membrane	Antigen processing and Natural killer cell mediated
216676_x_at	KIR3DL3	receptor, three domains, long cytoplasmic tail, 3	19	59927795	AC006293	115653	19q13.42	Hs.512572	4		Antigen processing and presentation
1553177_at	SH2D1B	SH2 domain containing 1B	1	-160631679	BC022407	117157	1q21	Hs.350581	10	biological process unknown molecular function unknown intracellular signaling cascade cellular component unknown	Natural killer cell mediated cytotoxicity
211397_x_at	KIR2DL2	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 2	19	164614	L76669	3803	19q13.4	Hs.643606	18	receptor activity integral to plasma membrane immune response membrane	Antigen processing and Natural killer cell mediated
218723_s_at	RGC32		13	40929711	NM_014059	28984	13q14.11	Hs.507866	7	calcium ion binding cytosol virus-infected cell apoptosis transformed cell apoptosis	Natural killer cell mediated Type I diabetes mellitus

1553681_a_at	PRF1	perforin 1 (pore forming protein)	10	-72027110	NM_005041	5551	10q22	Hs.2200	44	cellular defense response pathogenesis membrane integral to membrane cytolysis hemolysis of host red blood cells	
212509_s_at	PSMD14	proteasome (prosome, macropain) 26S subunit, non-ATPase, 14	2	161873185	BF968134	10213	2q24.2	Hs.567410	3	proteasome complex (sensu cytosol) catabolism	Proteasome
211687_x_at	KIR3DL1	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 1	19	59989604	AF262973	3811	19q13.4	Hs.512572 Hs.643606	32	receptor activity immune response membrane natural killer cell activation negative regulation of natural killer cell activity MHC class I receptor activity HLA-B specific inhibitory MHC class I receptor activity HLA-B specific inhibitory MHC class I receptor activity	Antigen processing and Natural killer cell mediated
210890_x_at	KIR2DL1	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 1	19	59973076	U24078	3802	19q13.4	Hs.512572 Hs.643606	29	receptor activity integral to plasma membrane immune response membrane integral to membrane negative regulation of natural killer cell activity HLA-C specific inhibitory MHC class I receptor activity	Antigen processing and Natural killer cell mediated
208203_x_at	KIR2DS5	killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 5	19	240823	NM_014513	3810	19q13.4	Hs.643606	6	receptor activity integral to plasma membrane immune response membrane HLA-C specific inhibitory MHC class I receptor activity	Antigen processing and presentation
205547_s_at	TAGLN	transgelin	11	116575249	NM_003186	6876	11q23.2	Hs.632099	18	actin binding muscle development membrane	
203921_at	CHST2	carbohydrate (N-acetylglucosamine-6-O) sulfotransferase 2	3	144321357	NM_004267	9435	3q24	Hs.8786	10	N-acetylglucosamine 6-O-sulfotransferase activity Golgi trans face carbohydrate metabolism N-acetylglucosamine metabolism sulfur metabolism inflammatory response membrane integral to membrane transferase activity intrinsic to Golgi membrane	Keratan sulfate biosynthesis Glycan structures -

229106_at	DYNLL2	dynein, light chain, LC8-type 2	17	53515797	AA401429	140735	17q22	Hs.591176	11	microtubule microtubule-based process myosin dynein complex intracellular transport	
205291_at	IL2RB	interleukin 2 receptor, beta	22	-35851827	NM_000878	3560	22q13	Hs.474787	54	receptor activity hematopoietin/interferon-class (D200-domain) cytokine receptor interleukin-2 receptor activity plasma membrane integral to plasma membrane protein complex assembly signal transduction external side of plasma membrane cytokine and chemokine mediated signaling pathway positive regulation of survival gene product activity	Cytokine-cytokineJak-STAT signaling pathway
243797_at	STK17B	serine/threonine kinase 17b (apoptosis-inducing)	2	-196710102	AW070323	9262	2q32.3	Hs.88297	6	nucleotide binding protein serine/threonine kinase ATP binding nucleus protein amino acid phosphorylation apoptosis induction of apoptosis protein kinase cascade transferase activity	
207313_x_at	KIR3DL2	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2	19	60053740	L76666	3812	19q13.4	Hs.512572	19	receptor activity integral to plasma membrane cellular defense response membrane	Antigen processing and Natural killer cell mediated
206267_s_at	MATK	megakaryocyte-associated tyrosine kinase	19	-3728967	NM_002378	4145	19p13.3	Hs.631845	28	regulation of progression through cell cycle nucleotide binding protein-tyrosine kinase activity protein-tyrosine kinase activity protein binding ATP binding soluble fraction protein amino acid phosphorylation protein amino acid phosphorylation intracellular signaling cascade mesoderm development cell proliferation positive regulation of cell transferase activity	Regulation of actin cytoskeleton Epithelial cell signaling in Helicobacter pylori
236717_at	LOC165186		2	29109800	AI632621	165186	2p23.2	Hs.47647		binding	
208179_x_at	KIR2DL3	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 3	19	59941785	AF022048	3804	19q13.4	Hs.512572	24	biological process unknown antigen binding receptor activity molecular function unknown integral to plasma membrane immune response cellular component unknown membrane	Antigen processing and Natural killer cell mediated

214617_at	PRF1	perforin 1 (pore forming protein)	10	-72027110	AI445650	5551	10q22	Hs.2200	44	calcium ion binding cytosol virus-infected cell apoptosis transformed cell apoptosis cellular defense response pathogenesis membrane integral to membrane cytolysis hemolysis of host red blood cells	Natural killer cell mediated Type I diabetes mellitus	
211410_x_at	KIR2DL5A	killer cell immunoglobulin-like receptor, two domains, long	19	229379	AF217487	57292	19p13.3	Hs.643606	8	receptor activity	Antigen processing and cytotoxicity	
225884_s_at	ZNF336	zinc finger protein 336	20	23293020	AL046381	64412	20p12.3-p11.21	Hs.28921	4	nucleic acid binding DNA binding protein binding intracellular nucleus transcription regulation of transcription, DNA-dependent zinc ion binding metal ion binding		
210164_at	GZMB	granzyme B (granzyme 2, cytotoxic T-lymphocyte-associated serine esterase 1)	14	-24170003	J03189	3002	14q11.2	Hs.1051	90	immunological synapse serine-type endopeptidase activity granzyme B activity nucleus cytoplasm proteolysis apoptosis cleavage of lamin peptidase activity cytolysis	Natural killer cell mediated Type I diabetes mellitus	
212316_at	NUP210	nucleoporin 210kDa	3	-13332736	AA502912	23225	3p25.1	Hs.475525	19	protein binding nucleus nuclear pore mRNA processing mRNA export from nucleus protein targeting protein transport membrane integral to membrane		
210031_at	CD247	CD247 molecule	1	-165666507	J04132	919	1q22-q23	Hs.156445	95	transmembrane receptor activity receptor signaling protein activity protein binding cytoplasm plasma membrane cell surface receptor linked signal transduction membrane integral to membrane T cell receptor complex protein homodimerization activity	Natural killer cell mediated T cell receptor signaling	
		killer cell immunoglobulin-like receptor, two domains, long		60006877,						receptor activity transmembrane receptor activity integral to plasma membrane cellular defense response signal transduction	Antigen processing and Natural killer cell mediated	

211245_x_at	KIR2DL4	cytoplasmic tail, 4	19	199896	AF002256	3805	19q13.4	Hs.512572	30	membrane nucleotide binding chromatin DNA binding chromatin binding ATP-dependent DNA helicase ATP binding nucleus chromatin assembly or disassembly regulation of transcription from RNA polymerase II promoter chromosome organization and biogenesis (sensu Eukaryota) hydrolase activity regulation of transcription	
228999_at	CHD2	chromodomain helicase DNA binding protein 2	15	91244422	AW514564	1106	15q26	Hs.220864	5		
228702_at	FLJ43663		7		AL569506	378805	7q32.3	Hs.150556	2		
226650_at	MGC11257		7	-1003168	A1984061	84310	7p22.3	Hs.116567	5		
221528_s_at	ELMO2	engulfment and cell motility 2	20	-44428098	BC000143	63916	20q13	Hs.210469	7	binding cytoskeleton phagocytosis apoptosis membrane	
1553099_at	TIGD1	tigger transposable element derived 1	2	-233121022	NM_145702	200765	2q37.1	Hs.211823	4	biological process unknown chromosome, pericentric region DNA binding molecular function unknown nucleus cellular component unknown regulation of transcription	
231863_at	ING3	inhibitor of growth family, member 3	7	120378052	AF161419	54556	7q31	Hs.489811	11	regulation of cell growth protein binding nucleus transcription regulation of transcription, DNA-dependent zinc ion binding chromatin modification metal ion binding	
213947_s_at	NUP210	nucleoporin 210kDa	3	-13332736	AI867102	23225	3p25.1	Hs.475525	19	protein binding nucleus nuclear pore mRNA processing mRNA export from nucleus protein targeting protein transport membrane integral to membrane	
213069_at	HEG1	HEG homolog 1 (zebrafish)	3		AI148659	57493	3q21.2	Hs.477420	4		

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