

Table W1. Statistical Differential Genes, Classified According to the Venn's Diagram (Figure 2).

Venn Section	Gene Name	Symbol	Genbank	Functional Classification	Ratio			FDR
					ENT1/NL	ENT5/L	HCC/NL	
12	fatty acid binding protein 7	Fabp7	U02096	trafficking/targeting proteins	0.39*	0.71	0.4*	0.00040
12	liver multidrug resistance-associated protein 6	Abcc6	U73038	stress response proteins	0.68*	0.61	0.42*	0.00050
12	inter alpha-trypsin inhibitor, heavy chain 4	Itih4	Y11283	protein turnover	2.68*	1.35	0.43*	
12	serine (or cysteine) proteinase inhibitor, clade A, member 1		M32247	protein turnover	0.63*	0.48	0.57*	0.00032
12	Lipase, hepatic	Lipc	M16235	metabolism	2.71*	2.25	0.73*	
12	Rat senescence marker protein 2A gene, exons 1 and 2	Smp2a	X63410	metabolism	5.67*	1.44	0.48*	
12	Cytochrome P450, subfamily IIC6	Cyp2c6	K03501	metabolism	2.08*	1.03	0.35*	
12	Cytochrome P450, subfamily IIC (mephenytoin 4-hydroxylase)	Cyp2c	J02657	metabolism	0.37*	0.34	0.14*	0.00049
12	mitogen activated protein kinase 3	Mapk3	M61177	intracellular transducers/ effectors/modulators	0.46*	0.61	1.48*	
12	Complement component 4 binding protein, alpha	C4bpa	Z50051	immune system proteins	1.56*	1.14	0.63*	
12	Keratin 8	Krt2-8	M63482	cytoskeleton/motility proteins	0.69*	0.86	1.76*	
12	activin beta E	Inhbe	AF089825	cell signaling, extracellular communication proteins	1.35*	0.89	0.72*	
20	ribosomal protein L6	Rpl6	X87107	translation	1.99	1.96	2.01*	0.00040
20	N-Acetyltransferase-2	Nat2	U17261	stress response proteins	0.61	0.48*	0.53*	0.00047
20	Cathepsin L	Ctsl	Y00697	protein turnover	1.12	1.33	1.63*	
20	angiotensinogen	Agt	L00091	protein turnover	0.38	0.22*	0.38*	0.00039
20	cyclin D1	Ccnd1	D14014	oncogenes and tumor suppressors	0.34	0.41*	2*	
20	UDP-glucuronosyltransferase	Ugt2b4	U06273	metabolism	1.48	1.97*	1.34*	0.00051
20	enolase 1, alpha	Eno1	X02610	metabolism	1.43	1.98*	1.28*	
20	hypoxanthine guanine phosphoribosyl transferase	Hprt	M63983	metabolism	1.78	2.04*	1.24*	0.00049
20	glutamic-pyruvate transaminase (alanine aminotransferase)	Gpt1	D10354	metabolism	0.6	0.43*	0.64*	0.00048
20	cytochrome P-450PCN (PNCN inducible)	Cyp3a1	M10161	metabolism	0.69	0.44*	0.28*	0.00043
20	Aldehyde dehydrogenase family 3, subfamily A1	Aldh3a1	J03637	metabolism	0.69	4.33*	4.52*	0.00069
20	NAD(P)H dehydrogenase, quinone 1	Nqo1	J02608	metabolism	2.02	3.79*	4.97*	0.00048
20	Sterol carrier protein 2, liver	Scp2	M34728	metabolism	0.92	0.71*	0.59*	
20	UDP glycosyltransferase 1 family, polypeptide A7	Ugt1a7	U75903	metabolism	1.74	3.01*	6.1*	0.00051
20	alkaline phosphatase, tissue-nonspecific	Alpl	J03572	metabolism	0.48	0.46*	1.85*	
20	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 2	Hmgcs2	M33648	metabolism	0.38	0.21*	0.66*	0.00040
20	glutamate cysteine ligase, modifier subunit	Gclm	L22191	metabolism	1.26	2.42*	4.59*	0.00040
20	Fatty acid binding protein 1, liver	Fabp1	M35991	intracellular transducers/ effectors/modulators	0.68	0.48*	0.33*	0.00052
20	MHC class I-related protein (MR1)		Y13972	immune system proteins	0.7	0.33*	0.52*	0.00041
20	Amiloride binding protein 1	Abp1	X73911	extracellular transport/ carrier proteins	0.54	0.61*	0.56*	0.00032
22	nuclear factor I/A	Nfia	D78017	transcription	0.57*	0.64	0.93	0.00051
22	alpha thalassemia/mental retardation syndrome X-linked (RAD54 homolog, S.cerevisiae)	Atrx	D64059	transcription	0.49*	0.56	0.89	0.00040
22	Fos like antigen 2	Fosl2	U18913	transcription	0.45*	0.76	0.79	0.00042
22	Early growth response 1	Egr1	M18416	transcription	0.44*	0.48	0.78	0.00051
22	protein disulfide isomerase-related protein	Txncd7	X79328	trafficking/targeting proteins	2.05*	2.71	0.85	
22	ADP-ribosylation factor 3	Arf3	L12382	trafficking/targeting proteins	0.62*	0.77	1.22	
22	ATP-binding cassette, sub-family C (CFTR/MRP), member 2	Abcc2	L49379	stress response proteins	0.4*	0.66	1.21	
22	acidic ribosomal protein P0	Arbp	Z29530	RNA processing, turnover, and transport	2.97*	1.87	1.23	0.00053
22	CDC-like kinase 3	Clk3	X94351	RNA processing, turnover, and transport	0.46*	0.52	0.76	0.00042
22	stress-induced-phosphoprotein 1 (Hsp70/Hsp90-organizing protein)	Stip1	Y15068	post-translational modification/protein folding	0.56*	0.71	1.3	
22	dihydropyrimidine dehydrogenase	Dpyd	D85035	metabolism	2.89*	1.9	0.77	
22	arachidonic acid epoxigenase	Cyp2c23	X55446	metabolism	1.63*	1	0.54	

Table W1. (continued)

Venn Section	Gene Name	Symbol	Genbank	Functional Classification	Ratio			FDR
					ENT1/NL	ENT5/L	HCC/NL	
22	cytochrome P450, 1a1	Cyp1a1	X00469	metabolism	2.96*	1.24	0.56	
22	sodium channel, voltage-gated, type 1, beta polypeptide	Scn1b	M91808	membrane channels and transporters	0.38*	0.5	1.13	0.00076
22	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2	Atp2a2	J04022	membrane channels and transporters	0.43*	0.58	0.79	0.00045
22	phosphodiesterase 3B	Pde3b	Z22867	intracellular transducers/ effectors/modulators	0.49*	0.59	0.73	
22	Transferrin	Tf	D38380	extracellular transport/ carrier proteins	1.6*	1.48	0.9	0.00048
22	insulin-like growth factor 1	Igf1	M15480	cell signaling, extracellular communication proteins	2.53*	1.3	0.48	
22	kinase substrate HASPP28	Pdap1	U41744	cell signaling, extracellular communication proteins	0.63*	0.77	1.4	
22	Follicle stimulating hormone receptor	Fshr	L02842	cell receptors (by ligands)	0.42*	0.6	1	0.00039
22	transforming growth factor, beta receptor 3	Tgfr3	M77809	cell receptors (by ligands)	0.36*	0.63	0.71	0.00044
22	nuclear receptor subfamily 2, group F, member 6	Nr2f6	AF003926	cell receptors (by activities)	0.63*	0.77	0.86	0.00045
40	ribosomal protein S5	Rps5	X58465	translation	4.27*	4.95*	1.39*	0.00040
40	nuclear factor of kappa light chain gene enhancer in B-cells inhibitor, alpha	Nfkbia	X63594	transcription	0.48*	0.59*	1.19*	
40	Inhibitor of DNA binding 3, dominant negative helix-loop-helix protein	Id3	D10864	transcription	0.42*	0.39*	1.56*	
40	Apolipoprotein E	ApoE	J02582	trafficking/targeting proteins	0.21*	0.2*	0.8*	0.00040
40	glutathione S-transferase, alpha 1	Gsta5	K01932	stress response proteins	3*	3.82*	2.01*	0.00038
40	Metallothionein	Mt1a	J00750	stress response proteins	5.08*	2.29*	0.55*	0.00186
40	glutathione-S-transferase, alpha type2	Gsta2	K01931	stress response proteins	5.29*	7.08*	2.8*	0.00011
40	solute carrier family 21, member 1	Slc21a1	L19031	stress response proteins	0.49*	0.44*	0.28*	0.00042
40	endothelin converting enzyme 1	Ece1	D29683	protein turnover	0.35*	0.4*	0.8*	0.00046
40	Glutathione peroxidase 1	Gpx1	X12367	protein turnover	0.54*	0.41*	0.54*	0.00031
40	glucose regulated protein, 58 kDa	Grp58	D63378	protein turnover	0.24*	0.4*	0.85*	0.00040
40	protein disulfide isomerase related protein (calcium-binding protein, intestinal-related)	Erp70	M86870	post-translational modification/ protein folding	0.42*	0.62*	0.65*	0.00049
40	Superoxide dismutase 2, mitochondrial	Sod2	X56600	metabolism	0.4*	0.62*	1.14*	
40	fatty acid Coenzyme A ligase, long chain 2	Acs1	D90109	metabolism	0.64*	0.43*	0.45*	0.00052
40	glycerol kinase	Gyk	D16102	metabolism	0.31*	0.34*	0.46*	0.00031
40	glutathione S-transferase, mu type 3 (Yb3)	Gstm3	J02744	metabolism	3.78*	4.86*	2.48*	0.00018
40	peroxiredoxin 5	Prdx6	Y17295	metabolism	2.35*	2.5*	1.65*	0.00049
40	sulfotransferase, estrogen preferring	Ste	M86758	metabolism	0.5*	0.53*	0.15*	0.00043
40	alcohol dehydrogenase 1	Adh1	M15327	metabolism	10.66*	11.57*	3.74*	0.00041
40	glutathione S-transferase, pi 1	Gstp1	X02904	metabolism	13.59*	21.89*	22.76*	0.00003
40	glutamate-cysteine ligase, catalytic subunit	Gclc	J05181	metabolism	2.28*	4.05*	7.22*	0.00012
40	aldehyde dehydrogenase family 1, subfamily A4	Aldh1a4	M23995	metabolism	4.24*	6.76*	4.22*	0.00031
40	phosphoenolpyruvate carboxykinase		K03243	metabolism	0.43*	0.22*	0.24*	0.00011
40	carbonic anhydrase 3	Ca3	M22413	metabolism	0.3*	0.19*	0.2*	0.00010
40	acyl-Coenzyme A oxidase 2, branched chain	Acox2	X95189	metabolism	0.31*	0.29*	0.27*	0.00009
40	Phosphoinositide 3-kinase, regulatory subunit, polypeptide 1 (p85 alpha)	Pik3r1	D64045	intracellular transducers/ effectors/modulators	0.35*	0.27*	0.65*	0.00040
40	GTP-binding protein (G-alpha-i2)	Gnai2	M17528	intracellular transducers/ effectors/modulators	0.44*	0.6*	1.72*	
40	guanine nucleotide binding protein, alpha 12	Gna12	D85760	intracellular transducers/ effectors/modulators	0.33*	0.42*	1.48*	
40	cold shock domain protein A	Csda	U22893	DNA binding and chromatin proteins	0.57*	0.64*	1.96*	
40	leukemia inhibitory factor	Lif	M32748	cell signaling, extracellular communication proteins	0.34*	0.23*	0.46*	0.00040
40	hepatocyte growth factor	Hgf	D90102	cell signaling, extracellular communication proteins	0.48*	0.54*	0.67*	0.00031
40	interleukin 6 receptor	Il6r	M58587	cell receptors (by ligands)	0.24*	0.17*	0.37*	0.00040
40	Interleukin 1 receptor, type 1	Il1r1	M95578	cell receptors (by ligands)	0.33*	0.26*	0.5*	0.00020
40	epidermal growth factor receptor	Egfr	M37394	cell receptors (by ligands)	0.43*	0.43*	0.52*	0.00012
40	Retinoid X receptor alpha	Rxra	L06482	cell receptors (by ligands)	0.17*	0.21*	0.7*	0.00042

Table W1. (continued)

Venn Section	Gene Name	Symbol	Genbank	Functional Classification	Ratio			FDR
					ENT1/NL	ENT5/L	HCC/NL	
40	Integrin, beta 1	Itgb1	U12309	cell receptors (by ligands)	2.15*	2.42*	1.29*	0.00042
40	ribosomal protein L24	Rp124	X78443		2.72*	3.12*	1.44*	0.00046
40	cytochrome P450, 8b1, sterol 12 alpha-hydrolase	Cyp8b1	AB018596		0.47	0.26*	0.29*	0.00039
43	rap7a	Dap	U05334		2.56*	3.81*	2.73*	0.00006
43	probasin	Pbsn	M27156		0.46*	0.48*	0.58*	0.00012
43	retinoblastoma binding protein 7	Rbbp7	AF090306	transcription	0.58	0.59*	1.19	
43	nuclear factor I/X	Nfix	AB012234	transcription	0.47	0.48*	0.83	0.00042
43	alpha1-antitrypsin promoter binding protein 2 (ATBP2)	Hivep1	X54250	transcription	0.42	0.47*	0.81	0.00040
43	Retinoblastoma-related gene	Rbl2	D55627	transcription	0.44	0.48*	0.77	0.00049
43	heat shock 10 kDa protein 1	Hspe1	X71429	stress response proteins	1.54	1.85*	0.9	
43	T-complex 1	Tcp1	D90345	stress response proteins	0.88	1.2*	1.14	
43	growth arrest and DNA-damage-inducible 45 alpha	Gadd45a	L32591	stress response proteins	0.42	0.34*	0.8	0.00045
43	Finkel-Biskis-Reilly murine sarcoma virusubiquitously expressed	Fau	X62671	protein turnover	0.49	0.41*	1.2	0.00070
43	Peptidylprolyl isomerase A (cyclophilin A)	Ppia	M19533	post-translational modification/ protein folding	1.56	2.45*	1.16	
43	suppression of tumorigenicity 13 (colon carcinoma) Hsp70-interacting protein	St13	X82021	post-translational modification/ protein folding	1.23	2.02*	1.66	0.00040
43	avian sarcoma virus CT10 (v-crk) oncogene homolog	Crk	D44481	oncogenes and tumor suppressors	0.38	0.29*	1.07	0.00045
43	Kirsten rat sarcoma viral oncogene homologue 2 (active)	Kras2	U09793	oncogenes and tumor suppressors	0.55	0.47*	1.24	
43	Superoxide dismutase 1, soluble	Sod1	Y00404	metabolism	0.51	0.39*	0.92	0.00040
43	acyl-coenzyme A:cholesterol acyltransferase	Soat1	D86373	metabolism	0.42	0.36*	0.76	0.00050
40	liver UDP-glucuronosyltransferase, phenobarbital inducible form	Udpgr2	M13506	metabolism	0.88	0.3*	0.17	0.00040
40	peroxiredoxin 1	Prdx1	D30035	metabolism	1.67	2.56*	1.55	0.00039
43	mel transforming oncogene (derived from cell line NK14)- RAB8 homolog	Rab8a	M83675	intracellular transducers/ effectors/modulators	0.49	0.58*	0.99	0.00048
43	Protein phosphatase 2 (formerly 2A), catalytic subunit, alpha isoform	Ppp2ca	X16043	intracellular transducers/ effectors/modulators	2.1	2.86*	1.05	0.00118
43	mitogen activated protein kinase 1	Mapk1	M64300	intracellular transducers/ effectors/modulators	0.36	0.4*	1.11	0.00082
43	GTPase Rab14	Rab14	M83680	intracellular transducers/ effectors/modulators	0.46	0.44*	0.89	0.00039
43	calmodulin 3	Calm3	X13817	intracellular transducers/ effectors/modulators	2.27	3.82*	1.36	0.00052
43	adrenergic receptor, alpha 2c	Adra2c	M58316	cell receptors (by ligands)	0.52	0.55*	0.9	0.00043
43	insulin-like growth factor 1 receptor	Igf1r	L29232	cell receptors (by ligands)	0.5	0.4*	0.92	0.00041
43	nuclear receptor subfamily 1, group H, member 4	Nr1h4	U18374	cell receptors (by ligands)	0.66	0.52*	0.89	
43	G protein-coupled receptor 27; gustatory receptor 27 (GUST27)	Olr1867	D12820	cell receptors (by ligands)	0.55	0.38*	0.77	0.00046
43	parathyroid hormone receptor	Pthr1	L19475	cell receptors (by ligands)	0.52	0.5*	0.71	0.00045
43	defender against cell death 1	Dad1	Y13336	cell receptors (by ligands)	1.16	1.66*	1.15	0.00051
43	galanin receptor 1	Galr1	U30290	cell receptors (by ligands)	0.71	0.62*	0.77	0.00046
43	leukemia inhibitor factor receptor alpha-chain	Lifr	D86345	cell receptors (by ligands)	0.62	0.39*	0.57	0.00049
43	5-hydroxytryptamine (serotonin) receptor 2B	Htr2b	X66842	cell receptors (by ligands)	0.45	0.48*	0.58	0.00046
43	androgen receptor	Ar	M20133	cell receptors (by activities)	0.46	0.55*	0.73	0.00045
43	cyclin-dependent kinase inhibitor 1B	Cdkn1b	D83792	cell cycle	0.45	0.45*	0.85	0.00041
43	small GTP-binding protein rab5	Rab5a	AF072935		0.4	0.45*	0.95	
43	notch gene homolog 2, (Drosophila)	Notch2	M93661		0.65	0.67*	0.95	
43	Secreted acidic cysteine-rich glycoprotein (osteonectin)	Sparc	Y13714		0.7	0.58*	0.9	
43	Sp1 transcription factor	Sp1	D12768		0.36	0.44*	0.87	0.00042
43	thioredoxin	Txn1	X14878		1.74	2.23*	1.19	0.00045
43	collagen, type III, alpha 1	Col3a1	M21354		0.87	0.55*	0.86	
43	high mobility group AT-hook 1	Hmga1	X62875		0.52	0.52*	0.78	0.00045
43	profilin	Pfn1	X96967		1.44	1.69*	1.32	
43	non-muscle myosin alkali light chain		S77858		2.41	2.64*	1.28	0.00040
43	CCAAT/enhancer binding protein, gamma	Cebpg	X64403		0.36	0.31*	0.67	0.00041
43	epidermal growth factor	Egf	U04842		0.82	0.55*	0.68	0.00046
69	ribosomal protein S9	Rps9	X66370	translation	4.72*	4.5*	1.35	0.00039

Table W1. (continued)

Venn Section	Gene Name	Symbol	Genbank	Functional Classification	Ratio			FDR
					ENT1/NL	ENT5/L	HCC/NL	
69	ribosomal protein S3	Rps3	X51536	translation	4.7*	5.08*	1.28	0.00049
69	nucleophosmin 1	Npm1	J03969	translation	2.09*	2.63*	1.49	0.00045
69	hepatocyte nuclear factor 4, alpha	Hnf4a	D10554	transcription	0.24*	0.22*	0.81	0.00040
69	zinc finger protein 36	Zfp36	X63369	transcription	0.34*	0.34*	0.8	0.00040
69	presenilin 1	Psen1	D82363	trafficking/targeting proteins	0.29*	0.31*	1.08	0.00046
69	ATP-binding cassette, sub-family B (MDR/TAP), member 4	Abcb4	L15079	stress response proteins	0.3*	0.29*	0.71	0.00046
69	solute carrier family 22, member 5	Slc22a5	AJ001933	stress response proteins	4.5*	6.32*	0.73	
69	heat shock 70kD protein 8		Y00054	stress response proteins	2.79*	2.99*	1.51	0.00040
69	tissue inhibitor of metalloproteinase 2	Timp2	L31884	protein turnover	0.46*	0.48*	0.97	0.00041
69	cathepsin B	Ctsb	X82396	protein turnover	3.04*	3*	1.07	0.00067
69	polyubiquitin	Ubb	D16554	protein turnover	0.36*	0.43*	0.95	0.00043
69	ubiquitin conjugating enzyme	Ube2b	M62388	protein turnover	0.43*	0.42*	0.6	0.00048
69	carboxypeptidase D	Cpd	U62897	protein turnover	0.58*	0.53*	1.13	
69	P450 (cytochrome) oxidoreductase	Por	M12516	post-translational modification/ protein folding	0.36*	0.27*	1.07	0.00078
69	chaperonin containing TCP1, subunit 3 (gamma)		X74801	post-translational modification/ protein folding	3.41*	4*	0.91	0.00111
69	H-ras proto-oncogene; transforming protein p21		M13011	oncogenes and tumor suppressors	0.37*	0.37*	0.96	0.00053
69	cyclin D2	Ccnd2	D16308	oncogenes and tumor suppressors	0.42*	0.43*	0.94	0.00040
69	phosphoglycerate kinase 1	Pgk1	M31788	metabolism	2.03*	2.14*	1.02	
69	cytochrome P450, 4a12	Cyp4a12	M37828	metabolism	2.43*	2.73*	1.1	0.00042
69	cytochrome c oxidase, subunit 4a	Cox4i1	X14209	metabolism	0.66*	0.68*	0.98	
69	7-dehydrocholesterol reductase	Dhcr7	AB016800	metabolism	2.9*	3.49*	1.14	0.00109
69	heme oxygenase 2	Hmox2	J05405	metabolism	0.49*	0.43*	0.86	0.00041
69	dopa/tyrosine sulfotransferase	Sult1b1	U38419	metabolism	1.53*	1.6*	0.88	
69	biliverdin reductase A	Blvra	M81681	metabolism	0.38*	0.47*	0.93	0.00049
69	Apolipoprotein A-IV	Apoa4	M00002	metabolism	0.18*	0.09*	0.68	0.00041
69	cytosolic acyl-CoA thioesterase 1	Cte1	AB010428	metabolism	0.32*	0.39*	1.27	0.00119
69	transferrin receptor	Tfrc	M58040	metabolism	1.37*	1.18*	1.27	
69	mitochondrial H+-ATP synthase alpha subunit	Atp5a1	X56133	metabolism	4.06*	3.61*	1.15	0.00043
69	carnitine palmitoyltransferase 1	Cpt1a	L07736	metabolism	0.25*	0.34*	0.71	0.00040
69	Glyceraldehyde-3-phosphate dehydrogenase	Gapd	M17701	metabolism	1.93*	2.04*	1.24	0.00051
69	cytochrome c oxidase subunit Vb	Cox5b	D10952	metabolism	0.2*	0.22*	0.76	0.00040
69	ATP-binding cassette, sub-family B (MDR/TAP), member 6	Abcb6	AJ003004	membrane channels and transporters	1.42*	2.19*	0.94	
69	inositol 1,4,5-triphosphate receptor type 1	Itpr1	U38665	membrane channels and transporters	0.41*	0.38*	0.75	0.00040
69	A-raf	Araf1	X06942	intracellular transducers/ effectors/modulators	0.46*	0.56*	1	0.00052
69	mitogen activated protein kinase kinase 2	Map2k2	D14592	intracellular transducers/ effectors/modulators	0.37*	0.42*	1.08	0.00061
69	p38 mitogen activated protein kinase	Mapk14	U73142	intracellular transducers/ effectors/modulators	0.33*	0.38*	1.14	0.00069
69	RAS p21 protein activator 1	Rasa1	L13151	intracellular transducers/ effectors/modulators	0.42*	0.46*	1.16	0.00046
69	Murine thymoma viral (v-akt) oncogene homolog 2	Akt2	D30041	intracellular transducers/ effectors/modulators	0.4*	0.39*	0.82	0.00044
69	mitogen-activated protein kinase 6	Mapk6	M64301	intracellular transducers/ effectors/modulators	0.47*	0.44*	1.22	
69	Insulin receptor substrate 1	Irs1	X58375	intracellular transducers/ effectors/modulators	0.39*	0.49*	0.76	0.00046
69	insulin-like growth factor binding protein 1	Igfbp1	M89791	extracellular transport/ carrier proteins	2.46*	2.5*	1.11	0.00059
69	insulin-like growth factor binding protein 3	Igfbp3	M31837	extracellular transport/carrier proteins	0.4*	0.61*	2.07	
69	8-oxoguanine-DNA-glycosylase	Ogg1	AF029690	DNA synthesis, recombination, and repair	0.48*	0.67*	1.04	
69	histone 2A	H2a	U95113	DNA binding and chromatin proteins	0.18*	0.23*	1.05	0.00070
69	vimentin	Vim	X62952	cytoskeleton/motility proteins	0.48*	0.43*	1	0.00039
69	alpha-tubulin	Tuba1	V01227	cytoskeleton/motility proteins	1.78*	2.24*	1.06	
69	fibroblast growth factor 10	Fgf10	D79215	cell signaling, extracellular communication proteins	4.09*	4.24*	1.37	0.00079
69	Glucose-dependent insulinotropic peptide	Gip	L08831	cell signaling, extracellular communication proteins	5.69*	4.04*	1.99	0.00052

Table W1. (continued)

Venn Section	Gene Name	Symbol	Genbank	Functional Classification	Ratio			FDR
					ENT1/NL	ENT5/L	HCC/NL	
69	vascular endothelial growth factor	Vegfa	M32167	cell signaling, extracellular communication proteins	0.34*	0.42*	1.16	0.00065
69	interleukin 4 receptor	Il4r	X69903	cell receptors (by ligands)	0.26*	0.34*	0.89	0.00040
69	met proto-oncogene	Met	U65007	cell receptors (by ligands)	0.34*	0.36*	0.66	0.00045
69	insulin receptor	Insr	M29014	cell receptors (by ligands)	0.37*	0.42*	0.74	0.00052
69	natriuretic peptide receptor 1	Npr1	M74535	cell receptors (by ligands)	0.36*	0.44*	0.66	0.00052
69	growth hormone receptor	Ghr	J04811	cell receptors (by ligands)	0.41*	0.35*	0.56	0.00050
69	Low density lipoprotein receptor	Ldlr	X13722	cell receptors (by ligands)	0.43*	0.42*	0.62	0.00032
69	Peroxisome proliferator activated receptor alpha	Ppara	M88592	cell receptors (by activities)	0.26*	0.38*	0.94	0.00050
69	nuclear receptor subfamily 1, group D, member 1	Nr1d1	M25804	cell receptors (by activities)	0.24*	0.35*	0.71	0.00045
69	Cyclin D3	Ccnd3	D16309	cell cycle	0.31*	0.31*	0.81	0.00043
69	tenascin		U15550	cell adhesion receptors/ proteins	0.55*	0.58*	0.9	0.00046
69	tumor necrosis factor receptor superfamily, member 1	Tnfrsf1a	M63122	apoptosis associated proteins	0.23*	0.23*	1.05	0.00047
69	B cell lymphoma 2 like	Bcl2l1	U72350	apoptosis associated proteins	0.3*	0.32*	0.81	0.00040
69	myeloid cell leukemia sequence 1	Mcl1	AF115380	apoptosis associated proteins	0.62*	0.44*	1.14	
69	UDP-glucuronosyltransferase 1 family, member 1	Ugt1a1	U20551		0.49*	0.45*	0.88	0.00039
69	cytochrome bc-1 complex core P		S74321		1.69*	1.57*	1.13	
69	cell growth regulatory with ring finger domain	Cgrrf1	U66471		0.38*	0.45*	0.78	0.00044
69	K-kininogen, differential splicing leads to HMW Kngk	Kng_v1	L29428		3.58*	3.49*	1.4	0.00043
69	nuclear factor kappa B subunit p65 (NFkB)		AF079314		0.39*	0.48*	1.24	0.00095
69	metallothionein 3	Mt3	S65838		5.56*	2.52*	0.78	0.00128
69	17-beta hydroxysteroid dehydrogenase type 2	Hsd17b2	X91234		0.72	0.8	0.5*	0.00052
69	actin, beta	Actb	V01217	cytoskeleton/motility proteins	0.85	0.72	1.27*	
69	aldehyde dehydrogenase family 3, subfamily A2	Aldh3a2	M73714	metabolism	1.41	0.98	0.63*	
84	alpha-2-HS-glycoprotein	Ahsg	X63446	intracellular transducers/ effectors/modulators	0.98	0.45	0.43*	0.00045
84	alpha-2-macroglobulin	A2m	J02635	protein turnover	1.07	0.65	2.46*	
84	annexin 1	Anxa1	M19967	metabolism	0.93	2.75	5.02*	0.00053
84	annexin 5	Anxa5	M21730	intracellular transducers/ effectors/modulators	1.39	1.43	3.63*	0.00039
84	Apolipoprotein A-II	Apoa2	X03468		1.16	0.65	0.32*	
84	apurinic/apyrimidinic endonuclease 1	Apex1	D44495	DNA synthesis, recombination, and repair	0.66	0.66	1.56*	
84	aquaporin 8	Aqp8	AF007775	membrane channels and transporters	1.79	4.14	1.77*	0.00040
84	arginase 1	Arg1	J02720	metabolism	1.3	0.72	0.49*	
84	arginosuccinate synthetase 1	Ass	M36708	metabolism	0.76	0.47	0.31*	0.00044
84	ATP-binding cassette, sub-family C (CFTR/MRP), member 3	Abcc3	AB010467	stress response proteins	0.7	0.84	1.52*	
84	Benzodiazepin receptor (peripheral)	Bzrp	M84221	cell receptors (by ligands)	0.89	1.4	1.8*	
84	betaine-homocysteine methyltransferase	Bhmt	AF038870	metabolism	1.19	0.75	0.28*	0.00089
84	calnexin	Canx	L18889	intracellular transducers/ effectors/modulators	0.9	0.94	0.71*	
84	calreticulin	Calr	X53363	intracellular transducers/ effectors/modulators	0.69	0.76	0.77*	
84	CD24 antigen	Cd24	U49062	cell adhesion receptors/ proteins	1.05	0.93	1.53*	
84	cell division cycle 42 homolog (S. cerevisiae)	Cdc42	M35543	intracellular transducers/ effectors/modulators	2.39	3.4	1.27*	0.00090
84	C-reactive protein	Crp	M83176	cell signaling, extracellular communication proteins	1.38	0.78	0.32*	0.00099
84	crystallin, beta B2	Crybb2	X16072	stress response proteins	0.49	0.65	0.65*	0.00041
84	cytochrome P450 2B1	Cyp2b1	M11251	metabolism	1.17	0.88	0.65*	
84	Cytochrome P450 IIA1 (hepatic steroid hydroxylase IIA1) gene	Cyp2a1	J02669	metabolism	0.83	0.39	0.34*	0.00039
84	cytochrome P450, 1a2	Cyp1a2	K02422	metabolism	1.52	0.66	0.22*	0.00088
84	cytochrome P450, 7a1	Cyp7a1	J05460	metabolism	0.97	0.61	0.33*	0.00046
84	cytochrome P450, subfamily 17	Cyp17a1	M21208	metabolism	1.02	0.54	0.54*	0.00040
84	cytochrome P450, subfamily 27b, polypeptide 1	Cyp27b1	AB001992	metabolism	0.65	0.99	0.63*	0.00040

Table W1. (continued)

Venn Section	Gene Name	Symbol	Genbank	Functional Classification	Ratio			FDR
					ENT1/NL	ENT5/L	HCC/NL	
84	diazepam binding inhibitor	Dbi	M14201		1.57	1.28	0.6*	
84	Discoidin domain receptor family, member 1	Ddr1	L26525	cell receptors (by activities)	0.71	0.75	5.03*	
84	DNA polymerase beta	Polb	J02776	DNA synthesis, recombination, and repair	0.54	0.74	0.68*	0.00039
84	enoyl Coenzyme A hydratase, short chain 1	Echs1	X15958	metabolism	1.69	1.42	0.69*	
84	eukaryotic translation elongation factor 2	Eef2	K03502	translation	0.75	0.52	1.29*	
84	fatty acid binding protein 5, epidermal	Fabp5	U13253	metabolism	2.38	1.69	1.93*	0.00046
84	Fibrinogen, gamma polypeptide	Fgg	J00734		1.46	0.89	0.52*	
84	Fibronectin 1	Fn1	X05834	extracellular matrix proteins	0.94	0.78	0.49*	0.00044
84	Flavin-containing monooxygenase 1	Fmo1	M84719	stress response proteins	0.87	0.56	0.52*	0.00040
84	fructose-1,6-bisphosphatase 1	Fbp1	M86240	metabolism	1.39	1.05	0.51*	
84	gamma-glutamyl hydrolase	Ggh	U38379	metabolism	0.75	0.89	1.35*	
84	gamma-glutamyl transpeptidase	Ggt1	M33821	metabolism	1.06	1.25	3.33*	0.00097
84	gastric inhibitory peptide receptor	Gipr	L19660	cell receptors (by ligands)	0.82	0.93	0.67*	
84	glucose-6-phosphate dehydrogenase	G6pdx	X07467	metabolism	1.6	2.92	3.42*	0.00050
84	glutamate oxaloacetate transaminase 1	Got1	J04171	metabolism	0.84	0.44	0.29*	0.00040
84	glutathione reductase	Gsr	U73174	metabolism	0.97	1.57	2.35*	
84	glutathione synthetase	Gss	L38615	metabolism	0.55	0.68	2.62*	
84	glycine transporter 1	Slc6a9	M88595	membrane channels and transporters	0.44	0.69	2.39*	
84	guanine nucleotide binding protein, alpha o	Gnao	M17526	intracellular transducers/ effectors/modulators	0.49	0.42	0.42*	0.00048
84	Huntington disease gene homolog	Hdh	U18650	trafficking/targeting proteins	1.09	0.53	0.6*	0.00108
84	hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase	Hsd3b	M67465	metabolism	0.54	0.51	0.36*	0.00040
84	hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 1	Hsd3b1	M38178	metabolism	1.09	1.27	0.49*	
84	hydroxysteroid dehydrogenase 17 beta, type 7	Hsd17b7	U44803	intracellular transducers/ effectors/modulators	1.1	0.91	0.71*	
84	Inhibitor of DNA binding 2, dominant negative helix-loop-helix protein	Id2	D10863	transcription	0.86	0.72	2.24*	
84	lactate dehydrogenase B	Ldhb	U07181	metabolism	0.63	0.92	1.94*	
84	laminin receptor 1 (67kD, ribosomal protein SA)	Lamr1	D25224		2.49	1.74	1.65*	0.00065
84	Male germ cell-associated kinase	Mak	M35862	intracellular transducers/ effectors/modulators	0.74	0.85	1.36*	
84	mitogen-activated protein kinase 12	Mapk12	X96488	intracellular transducers/ effectors/modulators	0.65	0.47	0.55*	0.00039
84	mouse double minute 2, human homolog of; p53-binding protein		Z12020	transcription	0.53	0.65	1.61*	
84	neuropilin-2	Nrp2	AF016297	cell receptors (by ligands)	0.75	0.98	1.84*	
84	O6-methylguanine-DNA methyltransferase	Mgmt	X54862	DNA synthesis, recombination, and repair	0.93	1.23	0.76*	
84	phospholipase A2, group VI	Pla2g6	U51898	metabolism	0.48	0.75	1.62*	
84	pre-alpha inhibitor heavy chain 3	Itih3	X83231	protein turnover	1.74	1.42	0.58*	
84	Prion protein, structural	Prnp	D50093		0.94	0.87	1.74*	
84	protein kinase inhibitor, alpha	Pkia	L02615	intracellular transducers/ effectors/modulators	0.72	0.94	2.08*	
84	Protein phosphatase 2 (formerly 2A), catalytic subunit, beta isoform	Ppp2cb	M23591	intracellular transducers/ effectors/modulators	0.84	1.06	1.99*	
84	Regucalcin	Rgn	D38467	intracellular transducers/ effectors/modulators	1.36	0.74	0.31*	0.00089
84	ribosomal protein L15	Rpl15	X78167	translation	0.95	0.75	1.32*	
84	ribosomal protein L3	Rpl3	X62166		1.25	0.94	1.32*	
84	serine (or cysteine) proteinase inhibitor, clade H, member 1	Serpinh1	M69246	stress response proteins	0.52	0.42	2.14*	
84	Serine protease inhibitor	Spin2c	D00753	protein turnover	1.23	1.18	0.75*	
84	serine protease inhibitor 2.4	Serpina3m	X69834	protein turnover	1.05	0.92	0.39*	
84	signal transducer and activator of transcription 1	Stat1	AF205604		1.08	1.07	0.64*	
84	sodium-dependent neutral amino acid transporter ASCT2	Slc1a5	AJ132846	membrane channels and transporters	0.53	0.72	0.61*	0.00043
84	solute carrier family 17 vesicular glutamate transporter), member 1	Slc17a1	U28504	membrane channels and transporters	1.47	3.33	3.6*	0.00049

Table W1. (continued)

Venn Section	Gene Name	Symbol	Genbank	Functional Classification	Ratio			FDR
					ENT1/NL	ENT5/L	HCC/NL	
84	solute carrier family 25 (mitochondrial adenine nucleotide translocator) member 4	Slc25a4	D12770	metabolism	1.73	1.3	1.53*	
84	syndecan 2	Sdc2	M81687		0.59	0.45	0.66*	0.00044
84	testis-specific heat shock protein-related gene hst70	Hspa2	X15705	stress response proteins	0.45	0.55	0.52*	0.00047
84	thioredoxin reductase 1	Txnrd1	AF220760		1.15	2.3	3.88*	0.00043
84	thymosin, beta 10	Tmsb10	M17698		1.05	1.12	4.79*	0.00073
84	thyroid hormone receptor alpha	Thra	X12744,M31177	oncogenes and tumor suppressors	0.61	0.62	0.75*	0.00039
84	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, gamma polypeptide	Ywhag	S55305	metabolism	1.02	1.35	2.04*	
84	Tyrosine 3-monooxygenase 5-monooxygenase activation protein, eta polypeptide	Ywhah	D17445	metabolism	0.53	0.92	1.54*	
84	Tyrosine 3-monooxygenase 5-monooxygenase activation protein, zeta polypeptide	Ywhaz	D17615	metabolism	0.51	0.71	1.66*	
84	tyrosine aminotransferase	Tat	M18340	metabolism	0.7	0.46	0.2*	0.00042
84	urate oxidase	Uox	J03959	metabolism	1.66	0.86	0.36*	
84	zinc finger protein 354A	Znf354a	M96548	transcription	0.52	0.37	0.22*	0.00048

Full list of differential genes classified according to Venn diagram (Figure 2).

*Ratios are statistically different compared with NL ($P \leq .05$).

Table W2. Functional Classification of the 290 Differential Genes.

Functional Classification	Number of Genes	% of Genes
apoptosis associated proteins	3	1.0
cell adhesion receptors/proteins	2	0.7
cell cycle	2	0.7
cell receptors	31	10.7
cell signaling, extracellular communication proteins	9	3.1
cytoskeleton/motility proteins	4	1.4
DNA binding and chromatin proteins	2	0.7
DNA synthesis, recombination, and repair	4	1.4
extracellular matrix proteins	1	0.3
extracellular transport/carrier proteins	4	1.4
immune system proteins	2	0.7
intracellular transducers/effectors/modulators	30	10.3
membrane channels and transporters	8	2.8
metabolism	80	27.6
oncogenes and tumor suppressors	6	2.1
post-translational modification/protein folding	6	2.1
protein turnover	17	5.9
RNA processing, turnover, and transport	2	0.7
stress response proteins	18	6.2
trafficking/targeting proteins	6	2.1
transcription	15	5.2
translation	7	2.4
unclassified	31	10.7
	290	100