Table S1. Clinical Characteristics of the patients with ICC, CHC and HCC

	ICC[a]			HCC[b]				P value[c]	
Variable	ICC	CHC	ICC+CHC	Age and Gender matched HCC	Age and Gender matched HCC set A	Age and Gender matched HCC set B	Extreme HCC	ICC vs HCC	ICC+CHC vs HCC
Number	16	7	23	46	23	23	61		
Gender									
Male/Female	11/5	7/0	18/5	36/10	18/5	18/5	57/4	0.5049	1
Age-yr									
Median	59.5	59		59.5	59.5	59.0	50		
Mean	56.4	57		57.1	57.3	56.7	50.1		
Range	35-73	42-65	35-73	35-73	39-72	35-73	25-72		
SD	12.138	7.767		10.117	9.612	10.808	10.175	0.9294	0.9691
Hepatitis Virus Infection									
HBs-Ag (Pos/Neg)	4/12	2/5	6/17	39/7	18/5	21/2	57/4	**0.0001**	**<0.0001**
HCV-Ab (Pos/Neg)	1/15	1/6	2/21	1/45	1/22	0/23	0/61	0.4527	0.2559
no infection (Yes/No)	11/5	4/3	15/8	6/40	4/19	2/21	4/57	**<0.0001**	**<0.0001**
Liver Chirrhosis									
Yes/No	4/12	2/5	6/17	41/5	20/3	21/2	60/1	**<0.0001**	**<0.0001**
TNM stage									
I, II/III, IV	12/4	5/2	17/6	40/6	18/5	22/1	45/16	0.5769	0.1727
Blood Chemistry Test									
AFP (>300/<300)	0/14	2/5	2/19	22/24	9/14	13/10	30/31	**0.0019**	**0.0024**
CEA (>5/<5)	6/8	1/6	7/14	11/35	4/19	7/16	6/49	0.3136	0.5622
CA19-9 (>100/<100)	6/8	1/6	7/14	3/43	1/22	2/21	4/49	**0.0096**	**0.0308**

[a]The clinical characteristics of the 23 patients in the ICC cohort derived from the Liver Cancer Institute and the Kanazawa Univerisity. Among them, 16 were classified as typical ICC and 7 as CHC.

[b]The clinical characteristics of the 107 patients in the HCC cohort derived from the Liver Cancer Institute. Two randomly selected groups, each consisting of 23 age and gender matched HCC cases were selected from a total of 246 cases with publically available gene expression data (GSE14520 and GSE6857). Among 246 cases, 61 cases were identified as extreme cases as defined by those with top quartile EpCAM expression in HCC tissues and with >1000 ng/ml of serum AFP levels vs. those with bottom quartile EpCAM expression and with <20 ng/ml of serum AFP levels.

[c]A value of less than 0.05 was considered to indicate statistical significance. P values were calculated with the use of Fisher's exact test, except for age, which was calculated with the unpaired t-test; TNM, which was calculated with the chi-square test

Table S2. List of 636 ICC-specific Genes[a]

Gene id	Gene symbol	Parametric p-value	FDR[b]	Geom mean of intensities in ICC/HpSC-like	Geom mean of intensities in ICC/MH-like	Fold-change (ICC/HpSC-like vs ICC/MH-like)
205753_at	CRP	0.0011463	0.0982	1701.75	217.8	7.81
206350_at	APCS	0.0004867	0.0823	664.34	95.05	6.99
209937_at	TM4SF4	0.0005474	0.0823	1817.16	363.41	5
205380_at	PDZK1	0.0020936	0.12	239.28	50.03	4.78
209283_at	CRYAB	0.0083636	0.187	257.54	54.97	4.69
219064_at	ITIH5	0.0007861	0.0867	460.63	98.93	4.66
207401_at	PROX1	0.004223	0.146	314.54	67.9	4.63
220502_s_at	SLC13A1	0.0029373	0.131	20.18	4.54	4.45
204041_at	MAOB	0.0028722	0.131	266.96	62.87	4.25
219304_s_at	PDGFD	0.0069775	0.174	194.6	48.7	4
220831_at	GCNT4	0.0104722	0.199	98.13	25.26	3.88
210382_at	SCTR	0.0035983	0.141	140.65	36.36	3.87
202834_at	AGT	0.0040568	0.146	313.66	84.35	3.72
210085_s_at	ANXA9	0.0076403	0.18	213.42	61.18	3.49
219195_at	PPARGC1A	0.0069584	0.174	155.34	47.58	3.26
206325_at	SERPINA6	0.0081236	0.184	136.35	42.52	3.21
209908_s_at	TGFB2	0.0028427	0.131	288.26	94.34	3.06
206010_at	HABP2	0.0101232	0.196	310.58	102.39	3.03
213325_at	PVRL3	0.0014831	0.107	150.15	50.14	2.99
209645_s_at	ALDH1B1	0.003234	0.137	155.37	53.83	2.89
207749_s_at	PPP2R3A	0.0008925	0.0867	53.27	18.92	2.82
205674_x_at	FXYD2	0.006458	0.171	122.63	48.11	2.55
219225_at	PGBD5	0.0068683	0.174	34.53	13.76	2.51
212921_at	SMYD2	5.54E-05	0.0634	139.73	55.87	2.5
203196_at	ABCC4	0.0068664	0.174	131.73	53.93	2.44
205890_s_at	EST	0.0019779	0.117	784.04	324.06	2.42
218350_s_at	GMNN	0.0086913	0.188	118.32	49.09	2.41
205313_at	HNF1B	0.0101514	0.196	280.84	122.61	2.29
207709_at	PRKAA2	0.0027784	0.131	95.48	41.89	2.28
202651_at	LPGAT1	0.0008307	0.0867	185.93	82	2.27
201951_at	ALCAM	0.0067704	0.174	206.4	90.78	2.27
206928_at	ZNF124	0.0101673	0.196	103.88	46	2.26
218440_at	MCCC1	0.0016123	0.111	178.7	80.74	2.21
208813_at	GOT1	0.0006842	0.0825	176.76	80.99	2.18
210745_at	ONECUT1	0.0025933	0.129	288.57	133.86	2.16
221412_at	VN1R1	0.0006099	0.0823	20.51	9.56	2.14
221740_x_at	LRRC37A2	0.0101416	0.196	115.78	54.05	2.14
201397_at	PHGDH	0.006573	0.172	121.33	56.83	2.13
218237_s_at	SLC38A1	0.007394	0.178	437.38	206.59	2.12
202613_at	CTPS	0.0005191	0.0823	156.23	74.35	2.1
201522_x_at	EST	0.0085819	0.187	62.43	29.82	2.09
201795_at	LBR	0.0014941	0.107	434.75	209.08	2.08
220220_at	LRRC37A4	0.0031619	0.136	158.57	76.38	2.08
203910_at	ARHGAP29	0.0067418	0.174	168.79	81.05	2.08
206346_at	PRLR	0.0068666	0.174	22.83	10.99	2.08
220483_s_at	RNF19A	0.0046708	0.152	527.02	255.89	2.06
202950_at	CRYZ	0.0014223	0.105	318.18	156.77	2.03
203860_at	PCCA	0.0016311	0.111	66.38	32.71	2.03

202783_at	NNT	0.0029783	0.132	375.64	185.71	2.02
205383_s_at	ZBTB20	0.0041091	0.146	195.14	96.55	2.02
205994_at	ELK4	0.0015027	0.107	125.38	63.33	1.98
204137_at	GPR137B	0.0005719	0.0823	205.05	104.17	1.97
204125_at	NDUFAF1	0.0005896	0.0823	52.72	26.71	1.97
218138_at	MKKS	0.0037193	0.143	72.3	36.75	1.97
220585_at	HKDC1	0.0047314	0.152	241.85	122.55	1.97
217820_s_at	ENAH	0.0045005	0.15	200.05	102.72	1.95
212125_at	RANGAP1	7.60E-06	0.0303	151.1	77.77	1.94
218536_at	MRS2	0.0009022	0.0867	109.71	56.47	1.94
201746_at	TP53	0.0011646	0.0986	166.45	85.7	1.94
206079_at	CHML	0.0004528	0.0823	69.22	36.12	1.92
219976_at	HOOK1	0.0021941	0.122	62.24	32.61	1.91
219255_x_at	IL17RB	0.0069297	0.174	63.98	33.92	1.89
203323_at	CAV2	0.0067798	0.174	211.87	112.81	1.88
219820_at	SLC6A16	0.0057095	0.163	40.71	21.76	1.87
203073_at	COG2	1.00E-05	0.0303	74.27	40.02	1.86
217894_at	KCTD3	0.002373	0.126	296.84	161.29	1.84
210887_s_at	EVC	0.0091368	0.19	125.88	68.7	1.83
205105_at	MAN2A1	0.0011998	0.0988	129.76	71.11	1.82
222212_s_at	LASS2	0.0038112	0.143	907.1	497.89	1.82
205931_s_at	CREB5	0.0079344	0.182	53.54	29.49	1.82
221897_at	TRIM52	0.0003326	0.0823	73.28	40.49	1.81
204579_at	FGFR4	0.0051533	0.157	148.85	82.25	1.81
200821_at	LAMP2	0.0079175	0.182	421.59	233.02	1.81
206182_at	ZNF134	0.0003802	0.0823	51.19	28.43	1.8
205670_at	GAL3ST1	0.0034606	0.139	101.96	56.84	1.79
202053_s_at	ALDH3A2	0.0102844	0.197	148.21	82.84	1.79
209296_at	PPM1B	0.010445	0.199	164.08	91.59	1.79
204526_s_at	TBC1D8	0.0055955	0.161	213.96	120.47	1.78
205217_at	TIMM8A	0.0005525	0.0823	36.4	20.61	1.77
214616_at	HIST1H3E	0.0033178	0.137	12.3	6.94	1.77
218766_s_at	WARS2	0.0093669	0.191	78.74	44.36	1.77
207417_s_at	ZNF177	0.0011861	0.0988	25.44	14.42	1.76
212164_at	TMEM183A	0.0080889	0.184	21.95	12.5	1.76
213996_at	YPEL1	0.0001468	0.0805	32.71	18.7	1.75
202427_s_at	BRP44	0.0020791	0.12	225.43	129.01	1.75
211200_s_at	EFCAB2	0.0028313	0.131	31.76	18.15	1.75
205074_at	SLC22A5	0.0039997	0.146	106.22	60.55	1.75
214838_at	SFT2D2	0.0020235	0.118	265.21	152.51	1.74
209875_s_at	SPP1	0.0059216	0.164	2420.5	1388.22	1.74
220215_at	ZNF669	0.0005475	0.0823	41.68	24.03	1.73
218890_x_at	MRPL35	0.0023614	0.126	53.88	31.12	1.73
204349_at	MED7	0.0039312	0.145	103.35	59.81	1.73
217630_at	ANGEL2	5.98E-05	0.0634	82.85	48.36	1.71
202169_s_at	AASDHPPT	0.002888	0.131	106.55	62.24	1.71
218270_at	MRPL24	0.0004216	0.0823	180.11	106.17	1.7
205655_at	MDM4	0.0004621	0.0823	180.13	106.07	1.7
201789_at	DHRS7	0.0004521	0.0823	119.77	70.85	1.69
212460_at	C14orf147	0.0015492	0.109	45.51	26.9	1.69
222267_at	TMEM209	0.0018487	0.113	101.94	60.8	1.68
209694_at	PTS	0.0024775	0.127	86.93	51.66	1.68
204012_s_at	LCMT2	0.0029181	0.131	43.93	26.21	1.68
220260_at	TBC1D19	0.0031317	0.136	49.95	29.85	1.67

208809_s_at	C6orf62	0.0058047	0.163	238.63	142.72	1.67
220020_at	XPNPEP3	0.0051409	0.157	70.63	42.56	1.66
217958_at	TRAPPC4	0.0058354	0.163	157.16	94.53	1.66
220481_at	GPR75	0.0063995	0.171	49.71	29.94	1.66
218605_at	TFB2M	0.0002648	0.0823	53.08	32.24	1.65
220144_s_at	ANKRD5	0.0004834	0.0823	30.93	18.77	1.65
218783_at	INTS7	0.0017646	0.113	93.76	56.69	1.65
219325_s_at	ELAC1	0.000594	0.0823	44.93	27.33	1.64
203774_at	MTR	0.0014747	0.107	107.03	65.66	1.63
203316_s_at	SNRPE	0.0015882	0.11	52.11	31.97	1.63
206225_at	ZNF507	0.0048143	0.153	100.77	61.79	1.63
200793_s_at	ACO2	0.0069215	0.174	232.59	143.13	1.63
205689_at	PCNXL2	0.0052173	0.158	89.31	55.47	1.61
204238_s_at	C6orf108	0.009388	0.191	94.71	58.71	1.61
221277_s_at	PUS3	0.000467	0.0823	15.21	9.5	1.6
218229_s_at	POGK	0.0005561	0.0823	147.54	92.3	1.6
201823_s_at	RNF14	0.0011171	0.0975	150.48	93.78	1.6
210066_s_at	AQP4	0.0072822	0.176	12.85	8.03	1.6
218882_s_at	WDR3	0.0088233	0.189	32.86	20.54	1.6
208140_s_at	LRRC48	0.0092674	0.19	25.51	15.96	1.6
202004_x_at	SDHC	0.0001239	0.0805	115.58	72.85	1.59
222283_at	ZNF480	0.0004215	0.0823	54.78	34.46	1.59
218344_s_at	RCOR3	0.000148	0.0805	163.47	103.48	1.58
209805_at	EST	0.0001596	0.0805	91	57.67	1.58
220018_at	CBLL1	0.0004098	0.0823	64.71	40.95	1.58
218594_at	HEATR1	0.0004413	0.0823	162.07	102.55	1.58
201966_at	NDUFS2	0.0008754	0.0867	263.23	167.12	1.58
207618_s_at	BCS1L	0.0055896	0.161	62.83	39.71	1.58
212704_at	ZCCHC11	0.0083953	0.187	124.68	78.75	1.58
209455_at	FBXW11	0.0005127	0.0823	120.18	76.31	1.57
219163_at	ZNF562	0.0032452	0.137	33.4	21.3	1.57
212297_at	ATP13A3	0.0048954	0.154	498.14	317.73	1.57
209111_at	RNF5	0.0051328	0.157	115.23	73.38	1.57
204838_s_at	MLH3	0.0055445	0.161	61.56	39.1	1.57
200652_at	SSR2	0.000434	0.0823	831.51	533.52	1.56
217810_x_at	LARS	0.0010583	0.0949	234.28	150.2	1.56
218359_at	NRSN2	0.0075776	0.18	57.42	36.79	1.56
209224_s_at	NDUFA2	0.007743	0.181	38.95	24.9	1.56
201910_at	FARP1	0.0078229	0.181	214.24	137.4	1.56
204693_at	CDC42EP1	0.0084103	0.187	189.55	121.8	1.56
217960_s_at	TOMM22	0.0003507	0.0823	84.13	54.31	1.55
219981_x_at	ZNF587	0.0009988	0.0909	185.21	119.16	1.55
219266_at	ZNF350	0.0036369	0.141	33.17	21.45	1.55
203032_s_at	FH	0.0059001	0.164	57.89	37.34	1.55
207573_x_at	ATP5L	0.0003148	0.0823	377.92	245.85	1.54
217797_at	UFC1	0.0004313	0.0823	254.28	165.02	1.54
218107_at	WDR26	0.0006005	0.0823	230.9	149.66	1.54
212763_at	CAMSAP1L1	0.0011201	0.0975	163.09	106.17	1.54
205877_s_at	ZC3H7B	0.0017182	0.113	140.37	91.4	1.54
215124_at	ZNF550	0.0031143	0.136	47.27	30.7	1.54
203054_s_at	TCTA	0.0032738	0.137	107.12	69.46	1.54
208475_at	FRMD4A	0.0039745	0.146	52.94	34.33	1.54
213005_s_at	KANK1	0.0082648	0.186	59.74	38.78	1.54
205223_at	DEPDC5	0.0090758	0.19	49.26	32.02	1.54

218200_s_at	NDUFB2	0.0091787	0.19	102.4	66.37	1.54
209171_at	ITPA	0.0001559	0.0805	84.55	55.17	1.53
212545_s_at	ZHX3	0.0006193	0.0823	38.71	25.31	1.53
208644_at	PARP1	0.0006237	0.0823	132.11	86.32	1.53
206961_s_at	MED20	0.0007973	0.0867	71.6	46.91	1.53
207753_at	ZNF304	0.001198	0.0988	32.46	21.27	1.53
203858_s_at	COX10	0.0029403	0.131	70.36	46.12	1.53
212215_at	PREPL	0.0085507	0.187	195.1	127.45	1.53
202271_at	FBXO28	0.0101499	0.196	158.61	103.97	1.53
219524_s_at	C20orf7	0.0006664	0.0825	14.97	9.87	1.52
201766_at	ELAC2	0.0006807	0.0825	124.76	81.84	1.52
207304_at	ZNF45	0.0029346	0.131	23.48	15.49	1.52
219433_at	BCOR	0.0035983	0.141	61.3	40.45	1.52
222116_s_at	TBC1D16	0.0077096	0.18	58.62	38.63	1.52
207125_at	ZNF225	0.0003589	0.0823	16.39	10.87	1.51
218626_at	EIF4ENIF1	0.0024394	0.127	87.42	58.08	1.51
218887_at	MRPL2	0.0032003	0.136	108.49	71.85	1.51
214631_at	ZBTB33	0.0046297	0.152	67.03	44.48	1.51
204082_at	PBX3	0.0092812	0.19	68.44	45.43	1.51
219676_at	ZSCAN16	0.0035558	0.14	23.27	15.52	1.5
220233_at	EST	0.0040113	0.146	95.25	63.45	1.5
200662_s_at	TOMM20	0.0048806	0.154	96.03	64.09	1.5
205750_at	BPHL	0.0055548	0.161	43.91	29.2	1.5
203333_at	KIFAP3	0.0063932	0.171	106.34	70.89	1.5
200635_s_at	PTPRF	0.0085403	0.187	208.58	139.11	1.5
207520_at	TROVE2	0.0017646	0.113	170.09	113.96	1.49
214764_at	RRP15	0.0023383	0.126	34.44	23.14	1.49
203181_x_at	SRPK2	0.0024045	0.126	156.19	105.01	1.49
202614_at	SLC30A9	0.0026697	0.131	114.17	76.71	1.49
203956_at	MORC2	0.0064192	0.171	108.88	72.84	1.49
215192_at	PMS2L4	0.0079801	0.183	382.03	256.49	1.49
201771_at	SCAMP3	0.0081179	0.184	199.51	133.74	1.49
204593_s_at	SMCR7L	0.0094219	0.191	46.5	31.23	1.49
206188_at	ZNF623	0.0002345	0.0823	85.97	58.19	1.48
205169_at	RBBP5	0.0006252	0.0823	72.09	48.84	1.48
220661_s_at	ZNF692	0.0006952	0.0825	100.39	67.88	1.48
202480_s_at	DEDD	0.0008531	0.0867	103.89	70.01	1.48
204977_at	DDX10	0.0016664	0.112	39.18	26.49	1.48
203800_s_at	MRPS14	0.003426	0.138	66.31	44.67	1.48
203581_at	RAB4A	0.0070776	0.174	55.04	37.08	1.48
200841_s_at	EPRS	0.0002499	0.0823	211.75	144.48	1.47
219244_s_at	MRPL46	0.0012195	0.0994	79.42	54.11	1.47
219184_x_at	TIMM22	0.0014368	0.105	107.19	72.7	1.47
212147_at	SMG5	0.0015397	0.109	142.03	96.56	1.47
202184_s_at	NUP133	0.0016409	0.111	56.25	38.17	1.47
206075_s_at	CSNK2A1	0.0017831	0.113	397.89	270.14	1.47
203531_at	CUL5	0.0024723	0.127	60.63	41.25	1.47
203155_at	SETDB1	0.0044846	0.15	117.63	79.85	1.47
201821_s_at	TIMM17A	0.0098721	0.195	62.88	42.71	1.47
220992_s_at	C1orf25	0.0002061	0.0823	74.82	51.31	1.46
202373_s_at	RAB3GAP2	0.0012312	0.0994	117.24	80.48	1.46
213893_x_at	PMS2L5	0.0019328	0.116	202.24	138.49	1.46
220182_at	SLC25A23	0.0045623	0.151	71.37	48.75	1.46
216983_s_at	ZNF224	0.0047162	0.152	66.66	45.67	1.46

204788_s_at	PPOX	0.0049506	0.155	22.41	15.36	1.46
208715_at	TMCO1	0.002735	0.131	198.9	136.92	1.45
212894_at	SUPV3L1	0.0033016	0.137	107.12	73.65	1.45
212591_at	RBM34	0.0034252	0.138	58.31	40.32	1.45
204261_s_at	PSEN2	0.0044199	0.149	69.39	47.98	1.45
207164_s_at	ZNF238	0.0099915	0.195	41.33	28.58	1.45
218068_s_at	ZNF672	0.0004363	0.0823	89.67	62.37	1.44
205434_s_at	AAK1	0.0019337	0.116	108.12	75.12	1.44
219376_at	EST	0.0020065	0.118	67.95	47.09	1.44
204699_s_at	C1orf107	0.0038877	0.144	52.64	36.49	1.44
202846_s_at	PIGC	0.0040693	0.146	45.97	31.97	1.44
218512_at	WDR12	0.0040731	0.146	115.11	80.02	1.44
204287_at	SYNGR1	0.0043659	0.148	42.8	29.65	1.44
219603_s_at	ZNF226	0.00603	0.166	30.87	21.41	1.44
211150_s_at	DLAT	0.0023794	0.126	91.43	63.74	1.43
203557_s_at	PCBD1	0.0028689	0.131	188.45	132.22	1.43
203429_s_at	C1orf9	0.0029416	0.131	73.12	51.03	1.43
214766_s_at	AHCTF1	0.0029652	0.131	99.9	69.94	1.43
205917_at	ZNF264	0.0050502	0.157	114.14	79.63	1.43
201273_s_at	SRP9	0.0054464	0.161	98	68.39	1.43
203075_at	SMAD2	0.0062031	0.169	118.85	83.14	1.43
213654_at	TAF5L	0.0062479	0.169	65.44	45.72	1.43
218398_at	MRPS30	0.0064031	0.171	90.65	63.6	1.43
214778_at	MEGF8	0.007609	0.18	45.89	32.05	1.43
202019_s_at	LANCL1	0.0099836	0.195	98.85	69.16	1.43
219123_at	ZNF232	1.46E-05	0.0353	11.47	8.07	1.42
202321_at	GGPS1	0.0002867	0.0823	37.27	26.28	1.42
203502_at	BPGM	0.0013697	0.105	49.4	34.9	1.42
209431_s_at	PATZ1	0.0027848	0.131	60.27	42.39	1.42
202261_at	VPS72	0.0029063	0.131	154.01	108.48	1.42
218253_s_at	LGTN	0.0033536	0.137	80.08	56.39	1.42
204832_s_at	BMPR1A	0.007162	0.175	153.48	108.24	1.42
203985_at	ZNF212	0.0094967	0.192	44.9	31.63	1.42
218379_at	RBM7	0.0099584	0.195	32.66	23.05	1.42
213660_s_at	EST	0.0002804	0.0823	61.77	43.67	1.41
221517_s_at	MED17	0.0006601	0.0825	62.61	44.4	1.41
202326_at	EHMT2	0.0008904	0.0867	69.88	49.67	1.41
212818_s_at	ASB1	0.0016162	0.111	52.88	37.57	1.41
203846_at	TRIM32	0.0022826	0.123	46.79	33.11	1.41
212153_at	POGZ	0.0052887	0.159	209.92	148.73	1.41
218784_s_at	C6orf64	0.0054453	0.161	45.73	32.4	1.41
218909_at	RPS6KC1	0.0079425	0.182	83.43	59.29	1.41
202099_s_at	DGCR2	0.0008055	0.0867	141.73	101.41	1.4
215244_at	DGCR5	0.0083838	0.187	43.39	30.9	1.4
205607_s_at	SCYL3	0.0087351	0.189	89.47	64.06	1.4
218721_s_at	C1orf27	2.93E-05	0.0507	79.88	57.39	1.39
220596_at	GPATCH4	0.0004697	0.0823	32.58	23.47	1.39
215742_at	EST	0.0009614	0.0895	160.24	115.11	1.39
219318_x_at	MED31	0.0013091	0.103	41.54	29.99	1.39
205527_s_at	GEMIN4	0.0022047	0.122	46.78	33.7	1.39
204138_s_at	MZF1	0.0051143	0.157	44.67	32.04	1.39
201536_at	DUSP3	0.0071896	0.175	127.76	92.18	1.39
218262_at	RMND5B	0.0082349	0.185	67.53	48.58	1.39
202190_at	CSTF1	0.0088502	0.189	44.11	31.82	1.39

213916_at	EST	0.0004823	0.0823	11.48	8.3	1.38
212683_at	SLC25A44	0.0054848	0.161	62	44.86	1.38
219151_s_at	EST	0.0069065	0.174	84.63	61.43	1.38
202251_at	PRPF3	0.0009749	0.0901	174.08	127.19	1.37
218455_at	NFS1	0.0022498	0.123	93.31	68.3	1.37
219097_x_at	C19orf42	0.0025893	0.129	129.26	94.45	1.37
204176_at	KLHL20	0.0035092	0.14	101.28	73.89	1.37
219078_at	GPATCH2	0.0048894	0.154	90	65.69	1.37
203730_s_at	ZKSCAN5	0.0049529	0.155	32.9	23.98	1.37
218873_at	GON4L	0.0053068	0.159	81.64	59.51	1.37
214442_s_at	PIAS2	0.0073078	0.176	136.19	99.6	1.37
219960_s_at	UCHL5	0.0078378	0.181	56.97	41.51	1.37
221090_s_at	OGFOD1	0.0084293	0.187	76.93	56.31	1.37
204991_s_at	NF2	0.0101192	0.196	80.76	58.96	1.37
215289_at	ZNF749	0.0007404	0.0846	32.57	23.96	1.36
218527_at	APTX	0.0008428	0.0867	38.36	28.15	1.36
208938_at	PRCC	0.0017441	0.113	153.25	112.33	1.36
208314_at	RRH	0.0018754	0.114	5.9	4.35	1.36
207268_x_at	ABI2	0.0056909	0.163	128.69	94.54	1.36
217865_at	RNF130	0.008451	0.187	165.62	121.58	1.36
220516_at	ZSCAN2	5.20E-06	0.0303	26.34	19.58	1.35
221201_s_at	ZNF155	0.0013362	0.104	16.54	12.24	1.35
201377_at	UBAP2L	0.001825	0.113	337.82	249.6	1.35
219324_at	EST	0.0037187	0.143	58.13	43.15	1.35
220067_at	SPTBN5	0.0065151	0.172	19.46	14.38	1.35
207877_s_at	NVL	0.0084922	0.187	66.99	49.45	1.35
204327_s_at	ZNF202	0.0023878	0.126	32.48	24.24	1.34
201793_x_at	SMG7	0.0031328	0.136	136.39	102	1.34
207391_s_at	PIP5K1A	0.003337	0.137	203.35	151.28	1.34
219848_s_at	ZNF432	0.0037284	0.143	22.6	16.87	1.34
210638_s_at	FBXO9	0.0041687	0.146	45.95	34.3	1.34
205835_s_at	YTHDC2	0.0041889	0.146	76.91	57.6	1.34
218912_at	GCC1	0.0045063	0.15	34.85	26.07	1.34
203612_at	BYSL	0.0047494	0.152	56.51	42.22	1.34
213528_at	C1orf156	0.0065448	0.172	20.87	15.52	1.34
219335_at	ARMCX5	0.0069998	0.174	27.03	20.19	1.34
219016_at	FASTKD5	0.0070685	0.174	50.53	37.59	1.34
219192_at	UBAP2	0.0088124	0.189	139.03	104.02	1.34
219810_at	VCPIP1	0.0009208	0.0873	147.94	110.88	1.33
212752_at	CLASP1	0.0024439	0.127	191.92	143.89	1.33
221931_s_at	SEH1L	0.0032663	0.137	63.52	47.83	1.33
203092_at	TIMM44	0.0043316	0.148	70.25	52.88	1.33
202420_s_at	DHX9	0.0047845	0.152	142.78	107.7	1.33
207515_s_at	POLR1C	0.0053195	0.159	93.4	70.4	1.33
218046_s_at	MRPS16	0.0063451	0.171	165.01	124.38	1.33
204071_s_at	TOPORS	0.0067445	0.174	45.99	34.53	1.33
200050_at	ZNF146	0.0096137	0.193	80.15	60.06	1.33
212408_at	TOR1AIP1	0.0001573	0.0805	70	53.09	1.32
218023_s_at	FAM53C	0.0021042	0.12	65.46	49.44	1.32
221837_at	KLHL22	0.0021384	0.121	42.28	32.1	1.32
217860_at	EST	0.002726	0.131	100.4	75.85	1.32
209511_at	POLR2F	0.0058209	0.163	111.33	84.4	1.32
210151_s_at	DYRK3	0.0060964	0.167	31.44	23.79	1.32
208191_x_at	PSG4	0.0081216	0.184	26.4	20.03	1.32

213124_at	ZNF473	0.0090794	0.19	32.47	24.58	1.32
201706_s_at	PEX19	0.0099482	0.195	79.22	59.84	1.32
218993_at	RNMTL1	0.0046752	0.152	37.19	28.49	1.31
214364_at	MTERFD2	0.0075493	0.18	33.24	25.28	1.31
209654_at	KIAA0947	0.0084591	0.187	73.65	56.11	1.31
202224_at	CRK	0.0014016	0.105	162.56	125.05	1.3
206175_x_at	ZNF222	0.0033085	0.137	14.4	11.12	1.3
205117_at	FGF1	0.0038837	0.144	13.41	10.28	1.3
207495_at	RAB28	0.0044088	0.149	37.57	28.79	1.3
218637_at	IMPACT	0.0089745	0.19	42.94	32.93	1.3
202026_at	SDHD	0.0095961	0.193	118.03	90.72	1.3
216338_s_at	YIPF3	0.0071184	0.175	214.77	166.35	1.29
208827_at	PSMB6	0.0103703	0.199	119.55	92.78	1.29
202702_at	TRIM26	9.57E-05	0.0724	80.45	62.81	1.28
200593_s_at	HNRNPU	0.0018107	0.113	512.01	399.55	1.28
219931_s_at	KLHL12	0.0023468	0.126	90.75	70.99	1.28
217900_at	IARS2	0.0034682	0.139	143.22	111.8	1.28
212557_at	ZNF451	0.0068076	0.174	79.03	61.79	1.28
218672_at	SCNM1	0.0102369	0.197	104.73	81.6	1.28
208289_s_at	EI24	0.0071511	0.175	199.09	156.6	1.27
219013_at	GALNT11	0.007664	0.18	121.59	96.11	1.27
214840_at	TOM1L2	0.0104631	0.199	59.1	46.49	1.27
203467_at	PMM1	0.0013026	0.103	54.13	43.11	1.26
203172_at	FXR2	0.0045707	0.151	93.28	73.98	1.26
209165_at	AATF	0.0001434	0.0805	112.08	89.48	1.25
215490_at	C1orf69	0.0013876	0.105	27.51	22.08	1.25
201269_s_at	NUDCD3	0.0033471	0.137	108.3	86.38	1.25
203013_at	ECD	0.0042282	0.146	74.23	59.18	1.25
220830_at	IMPG2	0.0090776	0.19	11.68	9.38	1.25
204795_at	PRR3	0.0009823	0.0901	53.15	42.71	1.24
202097_at	NUP153	0.0055648	0.161	153.28	124.11	1.23
218118_s_at	TIMM23	0.0019419	0.116	31.68	26.29	1.21
219292_at	THAP1	0.0099597	0.195	48.04	40.05	1.2
215854_at	EST	0.0047551	0.152	122.41	103.32	1.18
205181_at	ZNF193	0.0055157	0.161	35.13	29.66	1.18
204773_at	IL11RA	0.007213	0.175	35.02	30.03	1.17
210525_x_at	C14orf143	0.0043025	0.148	15.83	14.31	1.11
221008_s_at	AGXT2L1	0.0058657	0.163	5.03	5.76	0.87
205025_at	ZBTB48	0.0099316	0.195	18.71	21.61	0.87
220200_s_at	SETD8	0.0091639	0.19	51.66	60.38	0.86
213372_at	PAQR3	0.0095231	0.192	8.51	9.87	0.86
221680_s_at	ETV7	0.0040938	0.146	12.1	14.18	0.85
203503_s_at	PEX14	0.0075562	0.18	42.11	49.61	0.85
217994_x_at	CPSF3L	0.0005368	0.0823	61.46	73.55	0.84
204890_s_at	LCK	0.0101102	0.196	25.16	30.04	0.84
219282_s_at	TRPV2	0.000477	0.0823	25.72	31.15	0.83
200644_at	MARCKSL1	0.0055476	0.161	334.72	403.1	0.83
207765_s_at	KIAA1539	0.0099931	0.195	40.61	48.83	0.83
203098_at	CDYL	0.0062754	0.17	50.8	61.72	0.82
207760_s_at	NCOR2	0.0080339	0.183	50.27	61.03	0.82
219142_at	RASL11B	0.0008707	0.0867	10.7	13.28	0.81
219287_at	KCNMB4	0.0009239	0.0873	20.61	25.5	0.81
218132_s_at	TSEN34	0.0085791	0.187	32.6	40.27	0.81
202196_s_at	DKK3	0.0094406	0.191	22.77	28.07	0.81

213242_x_at	KIAA0284	0.0004017	0.0823	46.3	57.94	0.8
201063_at	RCN1	0.0021604	0.121	78.88	98.43	0.8
203230_at	DVL1	0.0028081	0.131	68.72	85.85	0.8
211489_at	ADRA1A	0.0042168	0.146	6.05	7.54	0.8
202009_at	TWF2	0.0078088	0.181	99.36	123.84	0.8
213755_s_at	SKI	0.008225	0.185	84.44	107.1	0.79
221241_s_at	BCL2L14	0.0091381	0.19	12.02	15.26	0.79
205020_s_at	ARL4A	0.0022749	0.123	27.01	34.68	0.78
209124_at	MYD88	0.0052361	0.158	53.38	68.42	0.78
211597_s_at	HOPX	0.0071682	0.175	25.65	32.82	0.78
218076_s_at	ARHGAP17	0.0091798	0.19	49.26	63.14	0.78
205872_x_at	PDE4DIP	0.0005719	0.0823	41.59	54.04	0.77
212886_at	CCDC69	0.0017784	0.113	15.26	19.89	0.77
218611_at	IER5	0.0038805	0.144	76.54	99.45	0.77
204164_at	SIPA1	0.0068258	0.174	43.87	56.68	0.77
208058_s_at	MGAT3	0.0097309	0.195	22.09	28.8	0.77
204328_at	TMC6	0.0020928	0.12	50.7	66.84	0.76
218077_s_at	ZDHHC3	0.0025308	0.129	50.61	66.97	0.76
202847_at	PCK2	0.0086151	0.188	29.52	38.87	0.76
207425_s_at	9-Sep	0.0100581	0.196	105.74	139.18	0.76
206244_at	CR1	0.0005917	0.0823	8.84	11.77	0.75
219431_at	ARHGAP10	0.0025616	0.129	15.69	20.99	0.75
203069_at	SV2A	0.0036366	0.141	16.35	21.89	0.75
205325_at	PHYHIP	0.0049052	0.154	12.72	17.06	0.75
211962_s_at	ZFP36L1	0.0091032	0.19	324.46	430.48	0.75
209651_at	TGFB1I1	0.000184	0.0823	55.33	74.89	0.74
203275_at	IRF2	0.0016758	0.112	101.77	138.43	0.74
218144_s_at	INF2	0.002638	0.13	77.51	104.4	0.74
221218_s_at	TPK1	0.0052347	0.158	10.93	14.79	0.74
212146_at	PLEKHM2	0.0061309	0.168	68.22	92.58	0.74
204456_s_at	GAS1	0.0091357	0.19	20.48	27.64	0.74
202501_at	MAPRE2	0.0093889	0.191	86.18	116.99	0.74
219143_s_at	RPP25	0.001575	0.11	24.52	33.41	0.73
204683_at	ICAM2	0.0026296	0.13	26.8	36.64	0.73
219400_at	CNTNAP1	0.0043703	0.148	22.39	30.65	0.73
214204_at	PACRG	0.0070684	0.174	7.97	10.92	0.73
218086_at	NPDC1	0.0094096	0.191	46.95	64.23	0.73
206046_at	ADAM23	7.33E-05	0.0634	7.85	10.84	0.72
219888_at	SPAG4	0.000806	0.0867	13.77	19.07	0.72
210632_s_at	SGCA	0.0037683	0.143	23.25	32.07	0.72
206127_at	ELK3	0.0056186	0.162	66.43	92.57	0.72
204894_s_at	AOC3	0.0067316	0.174	43.29	60.37	0.72
201642_at	IFNGR2	0.0093581	0.191	89.84	125.46	0.72
211564_s_at	PDLIM4	0.0002115	0.0823	22.56	31.57	0.71
208026_at	HIST1H4F	0.0007136	0.0831	14.78	20.68	0.71
217855_x_at	SDF4	0.0036526	0.141	99.42	140.21	0.71
218751_s_at	FBXW7	0.0037694	0.143	19.28	27.18	0.71
205179_s_at	ADAM8	0.0041542	0.146	38.23	53.74	0.71
201338_x_at	GTF3A	0.0041818	0.146	46.51	65.09	0.71
201953_at	CIB1	0.0064612	0.171	93.71	132.31	0.71
202701_at	BMP1	0.0051926	0.158	41.05	59.01	0.7
205683_x_at	TPSAB1	0.0054872	0.161	34.01	48.88	0.7
205578_at	ROR2	0.0069638	0.174	19.05	27.39	0.7
204194_at	BACH1	0.0074918	0.18	56.97	81.75	0.7

207036_x_at	GRIN2D	0.0077749	0.181	19.13	27.3	0.7
202175_at	CHPF	0.0090248	0.19	76.5	108.55	0.7
209850_s_at	CDC42EP2	0.0052323	0.158	34.19	49.33	0.69
214537_at	HIST1H1D	0.0055665	0.161	33.28	48.44	0.69
209946_at	VEGFC	0.0062222	0.169	58.02	84.61	0.69
210190_at	STX11	0.0067555	0.174	27.37	39.88	0.69
206476_s_at	NOVA2	0.0068371	0.174	32.88	47.32	0.69
204429_s_at	SLC2A5	0.0077004	0.18	20.45	29.62	0.69
206189_at	UNC5C	0.0104263	0.199	16.8	24.25	0.69
203379_at	RPS6KA1	0.0002741	0.0823	45.06	65.97	0.68
206580_s_at	EFEMP2	0.0004294	0.0823	44.76	66.19	0.68
203523_at	LSP1	0.0032995	0.137	50.65	74.02	0.68
213767_at	KSR1	0.0076311	0.18	42.63	62.99	0.68
201058_s_at	MYL9	0.0089596	0.19	97.16	143.82	0.68
212647_at	RRAS	0.0091032	0.19	101.42	149.24	0.68
206242_at	TM4SF5	0.0002556	0.0823	39.38	58.54	0.67
202727_s_at	IFNGR1	0.0002782	0.0823	19.07	28.25	0.67
219102_at	RCN3	0.0019488	0.116	53.44	79.85	0.67
208047_s_at	NAB1	0.0022411	0.123	18.1	27.11	0.67
219529_at	CLIC3	0.0025589	0.129	19.02	28.54	0.67
209684_at	RIN2	0.0037636	0.143	66.56	98.77	0.67
209732_at	CLEC2B	0.0041975	0.146	6.7	9.97	0.67
201307_at	11-Sep	0.0042198	0.146	198.66	296.83	0.67
202711_at	EFNB1	0.0055819	0.161	30.83	46.36	0.67
201605_x_at	CNN2	0.0067989	0.174	123	183.38	0.67
218603_at	HECA	0.0002704	0.0823	48.89	74.57	0.66
202205_at	VASP	0.000525	0.0823	87.16	133.06	0.66
212915_at	PDZRN3	0.0006527	0.0825	21.36	32.59	0.66
221814_at	GPR124	0.0011986	0.0988	53	80.07	0.66
218832_x_at	ARRB1	0.0033749	0.137	48.08	73.03	0.66
211715_s_at	BDH1	0.0042554	0.146	13.56	20.49	0.66
202368_s_at	TRAM2	0.0092442	0.19	57.21	86.29	0.66
200974_at	ACTA2	6.82E-05	0.0634	74.25	113.44	0.65
203650_at	PROCR	0.0008683	0.0867	20.17	31.16	0.65
212046_x_at	MAPK3	0.0022048	0.122	75.29	116.07	0.65
219909_at	MMP28	0.0043469	0.148	25.05	38.34	0.65
220272_at	BNC2	0.0065469	0.172	14.01	21.42	0.65
217762_s_at	RAB31	0.0086791	0.188	111.96	172.8	0.65
202075_s_at	PLTP	0.0007143	0.0831	54.84	86.03	0.64
204931_at	TCF21	0.0011358	0.0982	17.99	27.93	0.64
221478_at	BNIP3L	0.0028166	0.131	129.88	204.28	0.64
203325_s_at	COL5A1	0.0040453	0.146	89.99	141.55	0.64
207980_s_at	CITED2	0.0070334	0.174	54.58	85.25	0.64
205309_at	SMPDL3B	0.0085376	0.187	21.18	33	0.64
205349_at	GNA15	0.0085706	0.187	22.09	34.37	0.64
208453_s_at	XPNPEP1	0.0089719	0.19	101.02	158.74	0.64
203748_x_at	RBMS1	5.30E-06	0.0303	35.58	56.28	0.63
209156_s_at	COL6A2	0.0021679	0.121	99.02	156.18	0.63
203675_at	NUCB2	0.003197	0.136	52.72	83.06	0.63
212268_at	SERPINB1	0.003546	0.14	109.14	172.74	0.63
216873_s_at	ATP8B2	0.0040303	0.146	37.09	59.31	0.63
213038_at	RNF19B	0.0070233	0.174	70	110.92	0.63
201654_s_at	HSPG2	0.0091146	0.19	152.04	243.15	0.63
210083_at	SEMA7A	0.0095567	0.192	31.64	50.03	0.63

202519_at	MLXIP	0.0008089	0.0867	85.52	138.46	0.62
207521_s_at	ATP2A3	0.0009303	0.0873	38.72	62.73	0.62
210841_s_at	NRP2	0.0058217	0.163	45.73	73.18	0.62
203110_at	PTK2B	0.0003592	0.0823	40.12	65.63	0.61
202545_at	PRKCD	0.001271	0.101	57.82	95.53	0.61
216336_x_at	EST	0.0027635	0.131	16.77	27.55	0.61
207540_s_at	SYK	0.0045612	0.151	46.8	76.2	0.61
218923_at	CTBS	0.0050877	0.157	56.75	92.66	0.61
202987_at	TRAF3IP2	0.0058251	0.163	43.98	71.67	0.61
203417_at	MFAP2	0.0081283	0.184	53.3	87.56	0.61
204466_s_at	SNCA	0.0089904	0.19	13.08	21.46	0.61
204163_at	EMILIN1	4.83E-05	0.0634	56.86	95.17	0.6
201194_at	SEPW1	0.000646	0.0825	129.34	214.17	0.6
160020_at	MMP14	0.0007725	0.0867	152.65	253.15	0.6
208405_s_at	CD164	0.0061262	0.168	259.24	435.36	0.6
213422_s_at	MXRA8	0.0071479	0.175	188.21	313.44	0.6
210002_at	GATA6	0.0005281	0.0823	84.76	143.1	0.59
208310_s_at	EST	0.0017985	0.113	197.33	333.51	0.59
205627_at	CDA	0.0018215	0.113	20.91	35.38	0.59
219249_s_at	FKBP10	0.0018352	0.113	63.69	108.04	0.59
219132_at	PELI2	0.0042262	0.146	43.16	73.2	0.59
204442_x_at	LTBP4	0.008351	0.187	80.39	136.09	0.59
202375_at	SEC24D	0.0089031	0.19	62.58	106.83	0.59
205080_at	RARB	0.0093008	0.19	20.56	34.91	0.59
207050_at	CACNA2D1	0.0003217	0.0823	18.12	31.48	0.58
209950_s_at	VILL	0.0045395	0.151	30.58	52.66	0.58
203835_at	LRRC32	0.0050429	0.157	103.54	179.65	0.58
203729_at	EMP3	0.0057396	0.163	40.25	69.68	0.58
204083_s_at	TPM2	0.0060814	0.167	79.65	137	0.58
212185_x_at	MT2A	0.0079389	0.182	318.42	546.84	0.58
217966_s_at	FAM129A	0.0087379	0.189	36.32	62.69	0.58
201666_at	TIMP1	0.0102832	0.197	1333.42	2296.35	0.58
213010_at	PRKCDBP	0.0003263	0.0823	38.43	67.79	0.57
213001_at	ANGPTL2	0.001353	0.104	36.88	65.08	0.57
205715_at	BST1	0.0017242	0.113	36.28	63.52	0.57
204326_x_at	MT1X	0.0058067	0.163	64.69	113.06	0.57
219778_at	ZFPM2	0.0059953	0.166	22.21	39.12	0.57
204798_at	MYB	0.0098652	0.195	7.76	13.65	0.57
217992_s_at	EFHD2	0.0002944	0.0823	67.61	120.93	0.56
200897_s_at	PALLD	0.0011518	0.0982	31.28	55.75	0.56
209928_s_at	MSC	0.0014184	0.105	29.24	51.95	0.56
212651_at	RHOBTB1	0.0035151	0.14	31.29	56.31	0.56
214454_at	ADAMTS2	0.0038596	0.144	54.17	97.59	0.56
205547_s_at	TAGLN	0.0067748	0.174	170.2	301.27	0.56
217730_at	TMBIM1	0.0075351	0.18	382.48	686.54	0.56
201562_s_at	SORD	0.0065346	0.172	51.6	93.12	0.55
204401_at	KCNN4	0.0002901	0.0823	20.33	37.98	0.54
219045_at	RHOF	0.0013273	0.104	24.94	46.05	0.54
205168_at	DDR2	0.0038124	0.143	29.94	55.3	0.54
201852_x_at	COL3A1	0.0076059	0.18	577.38	1069.8	0.54
204688_at	SGCE	0.0092702	0.19	42.85	79.33	0.54
214774_x_at	TOX3	0.0003754	0.0823	33.55	63.63	0.53
202794_at	INPP1	0.0007343	0.0846	34.29	64.42	0.53
222379_at	KCNE4	0.0017121	0.113	27.16	51.33	0.53

218847_at	IGF2BP2	0.002803	0.131	57.25	108.47	0.53
202765_s_at	FBN1	0.0037894	0.143	106.1	201.61	0.53
203904_x_at	CD82	1.79E-05	0.0361	105.97	202.21	0.52
220613_s_at	SYTL2	0.0005195	0.0823	16.3	31.31	0.52
204445_s_at	ALOX5	0.0018412	0.113	80.8	155.23	0.52
209655_s_at	TMEM47	0.0026063	0.129	98.09	189.08	0.52
201792_at	AEBP1	0.005539	0.161	177.94	341.42	0.52
204994_at	MX2	0.0069369	0.174	45.28	86.55	0.52
221729_at	COL5A2	0.0086717	0.188	95.8	183.44	0.52
201425_at	ALDH2	0.009238	0.19	119.9	229.65	0.52
203385_at	DGKA	0.009815	0.195	67.66	130.14	0.52
201749_at	ECE1	0.0003514	0.0823	102.97	200.86	0.51
203836_s_at	MAP3K5	0.0040601	0.146	40.6	79.32	0.51
210139_s_at	PMP22	0.0004664	0.0823	105.62	212.31	0.5
203988_s_at	FUT8	0.00084	0.0867	37.15	73.66	0.5
204253_s_at	VDR	0.0020694	0.12	17.58	35.34	0.5
205141_at	ANG	0.0058491	0.163	38.16	75.63	0.5
201261_x_at	BGN	0.0062895	0.17	391.27	789.07	0.5
205174_s_at	QPCT	0.0084306	0.187	16.75	33.58	0.5
200784_s_at	LRP1	0.0004764	0.0823	144.44	293.66	0.49
202820_at	AHR	0.0031668	0.136	122.77	249.45	0.49
209101_at	CTGF	0.0080177	0.183	196.78	403.62	0.49
209182_s_at	C10orf10	0.0099468	0.195	160.41	326.47	0.49
213059_at	CREB3L1	6.90E-05	0.0634	22.54	47.15	0.48
220388_at	FER1L4	0.0008879	0.0867	22.21	46.37	0.48
201761_at	MTHFD2	0.0013769	0.105	25.93	54.18	0.48
206539_s_at	CYP4F12	0.0017783	0.113	10.53	22.59	0.47
203058_s_at	PAPSS2	0.0020669	0.12	58.19	122.71	0.47
220518_at	ABI3BP	0.0027375	0.131	25.42	53.56	0.47
209708_at	MOXD1	0.0057015	0.163	37.88	80.41	0.47
200632_s_at	NDRG1	0.0077183	0.18	210.26	449.91	0.47
204378_at	BCAS1	0.0047064	0.152	14.21	30.99	0.46
209365_s_at	ECM1	0.0067922	0.174	46.04	99.58	0.46
201324_at	EMP1	0.0092867	0.19	84.11	183.09	0.46
207463_x_at	PRSS3	0.0015079	0.107	28.01	61.67	0.45
205068_s_at	ARHGAP26	0.0047464	0.152	88.12	196.13	0.45
212925_at	C19orf21	0.0078111	0.181	27.87	62.15	0.45
220945_x_at	MANSC1	0.0102524	0.197	30.03	67.05	0.45
201829_at	NET1	0.0006681	0.0825	81.24	183.8	0.44
203499_at	EPHA2	0.0008389	0.0867	38.01	87.25	0.44
206514_s_at	EST	0.0010296	0.093	23.22	52.41	0.44
209621_s_at	PDLIM3	0.0013988	0.105	27.82	63.18	0.44
208505_s_at	FUT2	0.0090966	0.19	16.32	37.27	0.44
204472_at	GEM	0.0071997	0.175	65.56	154.2	0.43
205076_s_at	MTMR11	0.0097832	0.195	56.62	131.03	0.43
207601_at	SULT1B1	0.0028277	0.131	6.15	14.74	0.42
204748_at	PTGS2	0.0033439	0.137	18.78	46.28	0.41
211726_s_at	FMO2	0.0044184	0.149	12.9	31.4	0.41
203083_at	THBS2	0.0012657	0.101	233.18	585.72	0.4
207415_at	PLA2R1	0.0025456	0.129	29.25	72.43	0.4
209955_s_at	FAP	0.0047813	0.152	36.39	91.41	0.4
217892_s_at	LIMA1	0.0027584	0.131	60.71	154.99	0.39
202411_at	IFI27	0.0046967	0.152	57.16	147.69	0.39
218657_at	RAPGEFL1	0.0051546	0.157	20.49	52.43	0.39

209924_at	CCL18	0.0065046	0.172	17.94	45.58	0.39
212543_at	AIM1	0.0006812	0.0825	23.31	61.82	0.38
212092_at	PEG10	0.0028333	0.131	16.18	42.4	0.38
203913_s_at	HPGD	0.0027505	0.131	6.39	17.1	0.37
217979_at	TSPAN13	0.0029072	0.131	32.69	87.37	0.37
201474_s_at	ITGA3	0.006191	0.169	77.53	210.66	0.37
206084_at	PTPRR	0.0067501	0.174	6.53	17.64	0.37
219934_s_at	SULT1E1	0.0098864	0.195	3.45	9.42	0.37
205892_s_at	FABP1	0.0006929	0.0825	6.97	19.43	0.36
206805_at	SEMA3A	0.0015851	0.11	12.92	36.25	0.36
220034_at	IRAK3	0.0025317	0.129	11.83	32.58	0.36
202434_s_at	CYP1B1	0.007424	0.178	52.91	146.35	0.36
204745_x_at	MT1G	6.00E-04	0.0823	53.71	152.16	0.35
205515_at	PRSS12	0.0031443	0.136	21.51	60.77	0.35
200824_at	GSTP1	0.009914	0.195	165.25	473.9	0.35
206391_at	RARRES1	0.0087993	0.189	22.41	66.51	0.34
213432_at	MUC5B	0.0022796	0.123	19.36	59.27	0.33
208131_s_at	PTGIS	0.0002147	0.0823	28.91	89.85	0.32
209211_at	KLF5	0.0008112	0.0867	54.33	169.03	0.32
203868_s_at	VCAM1	0.0008965	0.0867	41.49	130.31	0.32
209373_at	MALL	0.0018537	0.113	36.48	114.34	0.32
205668_at	LY75	0.0041047	0.146	21.23	65.77	0.32
203819_s_at	IGF2BP3	0.004721	0.152	9.48	30.23	0.31
220021_at	TMC7	0.005817	0.163	30.16	96.39	0.31
207852_at	CXCL5	0.0051147	0.157	108	360.34	0.3
202887_s_at	DDIT4	0.0001866	0.0823	70.55	240.63	0.29
215129_at	PIK3C2G	0.0034096	0.138	5.89	20.13	0.29
205568_at	AQP9	0.005825	0.163	16.46	57.2	0.29
202934_at	HK2	0.0064484	0.171	34.05	117.53	0.29
213975_s_at	LYZ	0.0088376	0.189	124.47	434.03	0.29
201842_s_at	EFEMP1	0.003606	0.141	92.05	331.78	0.28
218322_s_at	ACSL5	0.0010746	0.0956	31.07	123.4	0.25
204602_at	DKK1	0.0030733	0.135	7.98	33.81	0.24
202488_s_at	FXYD3	0.0033393	0.137	45.65	189.14	0.24
204855_at	SERPINB5	0.0077061	0.18	5.82	23.8	0.24
208170_s_at	TRIM31	8.43E-05	0.068	12.09	52.74	0.23
216666_at	LOC93432	0.0051002	0.157	7.67	33.91	0.23
204116_at	IL2RG	0.000135	0.0805	45.54	206.66	0.22
207847_s_at	MUC1	0.0012291	0.0994	58.46	294.96	0.2
219014_at	PLAC8	0.0030249	0.133	13.35	69.03	0.19
209114_at	TSPAN1	0.0053215	0.159	17.13	115.86	0.15
209847_at	CDH17	0.0024602	0.127	12.02	83.56	0.14
203108_at	GPRC5A	0.0037584	0.143	16.21	114.06	0.14
206239_s_at	SPINK1	0.004111	0.146	24.14	170.8	0.14
205597_at	SLC44A4	0.0016886	0.112	27.1	226.07	0.12
208083_s_at	ITGB6	0.0011002	0.0972	10.66	95.77	0.11
209173_at	AGR2	5.32E-05	0.0634	5.57	75.44	0.074
205927_s_at	CTSE	0.0004652	0.0823	17.13	292.26	0.059

[a]Genes are listed in order of fold change between ICC/HpSC-like and ICC/MH-like cases.

[b]FDR: False Discovery Rate

Table S3. 23 ICC-specific microRNAs[a]

Unique id	Parametric p-value	Geom mean of intensities in ICC/HpSC-like	Geom mean of intensities in ICC/MH-like	Fold-change (ICC/HpSC-like vs ICC/MH-like)
hsa-miR-200c	0.013773	9.4	122.51	0.077
hsa-miR-141	0.0232948	5.82	47.09	0.12
hsa-miR-139-5p	0.0424683	3.41	9.03	0.38
hsa-miR-105	0.0105404	2.68	5.36	0.5
hsa-miR-1203	0.0486182	1.94	3.2	0.61
hsa-miR-1248	0.0222381	1.22	1.94	0.63
hsa-miR-629	0.0377526	2.67	4.05	0.66
hsa-miR-1251	0.0344576	2.77	1.59	1.74
hsa-miR-885-5p	0.0355507	8.74	4.99	1.75
hsa-miR-885-3p	0.0482183	1.57	0.9	1.76
hsa-miR-383	0.0111231	5.38	3	1.79
hsa-miR-92a	0.021228	780.83	431.21	1.81
hsa-miR-302c	0.0283948	2.79	1.51	1.84
hsa-miR-649	0.0298556	2.21	1.06	2.07
hsa-miR-30e	0.0049886	111.87	53.54	2.09
hsa-miR-1538	0.0255434	2.46	1.16	2.12
hsa-miR-30c	0.0231812	140.54	65.71	2.14
hsa-miR-183	0.0498748	16.58	7.63	2.17
hsa-miR-15b	0.0233879	163.12	72.72	2.24
hsa-miR-96	0.0451614	283.52	107.27	2.64
hsa-miR-30a	0.0054233	711.65	263.57	2.7
hsa-miR-30d	0.0039945	227.54	83.98	2.71
hsa-miR-30b	0.0014781	2852.67	824.48	3.46

[a]microRNAs are listed in order of fold change between ICC/HpSC-like and ICC/MH-like cases.

Table S4. Top 9 gene networks from Ingenuity Pathway Analysis

ID	Molecules in Network	Score	Focus Molecules	Top Functions
1	AMPK, Creatine Kinase, **DLAT**, **FBXW11**, **FXR2**, Growth hormone, **HNRNPU**, **KLHL22**, **LCMT2**, **MAOB**, **MED20**, **MED31**, **NF2**, **NFS1**, **NUDCD3 (includes EG:23386)**, **PBX3**, **PCBD1**, **PDZK1**, PI3K (complex), **PPARGC1A**, **PRKAA2**, **PRLR**, **PTS**, **RAB4A**, **RBBP5**, RNA polymerase II, **SDHC**, **SDHD**, **SMYD2**, Succinate dehydrogenase, **THAP1**, TRAP/Media, **WDR26**, ZNF238, **ZNF451**	49	28	Cancer, Genetic Disorder, Metabolic Disease
2	**ABI2**, **AHCTF1**, **ALDH1B1**, **APCS**, **BCOR**, Cbp/p300, **CRP**, **CSNK2A1**, **DHX9**, **ENAH**, **GEMIN4**, **GMNN**, HISTONE, Holo RNA polymerase II, **MED17**, **MED7 (includes EG:9443)**, Mediator, NFkB (complex), **NUP133**, **NUP153**, Pias, **PIAS2**, **PIP5K1A**, **POLR2F**, **PPM1B**, **PRPF3**, **RANGAP1**, Rnr, **SEH1L**, **SNRPE**, **SNRPN**, **TAF5L**, **TOPORS**, **TRIM32**, **WDR12**	47	28	Cellular Assembly and Organization, Cell Death, Embryonic Development
3	**ALCAM**, **CAV2**, Collagen(s), **DUSP3**, ERK1/2, **FGF1**, Fgfr, **FGFR4**, **GAL3ST1**, **HABP2**, HDL, Laminin, **LAMP2**, Mek, Nos, Pdgf, PDGF BB, **PDGFD**, Pdgfr, PLC gamma, **PSEN2**, **PTPRF**, Rxr, **SMAD2**, Smad2/3, **SPP1**, Tgf beta, **TGFB2**, **TIMM22**, **TIMM44**, **TIMM17A (includes EG:10440)**, **TIMM8A**, **TOMM20**, **TOMM22**, **TRIOBP**	32	21	Protein Trafficking, Cellular Movement, Organ Development
4	**AATF**, Actin, **AGT**, Akt, **ALDH3A2**, **BMPR1A**, Caspase, Collagen type I, Creb, **CREB5**, **CTPS**, Cytochrome c, **DYRK3**, **EHMT2**, **EI24**, FSH, **GOT1**, hCG, Histone h3, Hsp70, Insulin, **INTS7**, **LBR**, Lh, **PMM1**, PP2A, **PPP2R3A**, **PVRL3**, **SETDB1**, **SMG5**, **SMG7**, **SRPK2**, **TBC1D8**, **TP53**, Vegf	29	21	Organ Morphology, Renal and Urological System Development and Function, Developmental Disorder
5	ADRBK1, ATN1, BAI3, CDH1, **DGCR2**, EMR1, **FBXO9**, FFAR3, **FXYD2**, **GCC1**, Gpcr, **GPR75**, GPR87, **GPR137B**, IL12 (complex), Interferon alpha, **ITIH5**, **MEGF8**, MIR373, **MORC2**, **MRPL2**, **RMND5B**, **RNF14**, **RRH**, **SCTR**, **SLC25A23**, SMAD4, SMURF2, SSTR5, STAT4, STK11, **TCTA**, **VN1R1**, **ZBTB33**, **ZNF226**	28	19	Genetic Disorder, Renal and Urological Disease, Gastrointestinal Disease
6	14-3-3, **AAK1**, **APTX**, **ARHGAP29**, **CRK**, **ELK4**, ERK, F Actin, Focal adhesion kinase, **GABBR1**, Gpcr, IgG, IL1, Jnk, **KANK1**, **KIFAP3**, **LASS2**, LDL, **MAN2A1**, **MDM4**, MIR1, MIR124, **MZF1**, P38 MAPK, **PARP1**, Pkc(s), **POGK**, **RABL2A**, Rac, Ras, Ras homolog, Rock, **SLC22A5**, **XPNPEP3**, **ZNF264**	26	18	DNA Replication, Recombination, and Repair, Cancer, Gastrointestinal Disease
7	**ACO2**, APOA4, BAI1, **BCS1L**, **BPHL**, CDC5L, CTNNBL1, **EIF4ENIF1**, HNF4A, **HOOK1**, **IL11RA**, JKAMP, MRPL53, MRPS21, NTHL1, POLR1B, **POLR1C**, POLR3E, POLR3G, POLRMT, **PRCC**, **PUS3**, **RNF5 (includes EG:6048)**, **RNMTL1**, RTCD1, **SARS2**, TRIM41, TRUB2, **VN1R1**, **ZNF193**, **ZNF202**, **ZNF232**, ZNF446, **ZNF473**, **ZSCAN16**	26	18	Genetic Disorder, Metabolic Disease, Renal and Urological Disease
8	ABCF3, **ANGEL2**, AP2A1, **C19ORF42**, **C1ORF25**, **C1ORF156**, CIAO1, DNAJA2, **FAM53C**, HNF1A, HNF4A, **LPGAT1**, **MRPL24**, **MRPL46**, **TBC1D16**, TOE1, **TP53**, **ZKSCAN5**, **ZNF146**, **ZNF155**, **ZNF222**, **ZNF225**, **ZNF304**	24	16	Gene Expression, Infection Mechanism, Cancer
9	**C14ORF147**, **CBLL1**, CDC5L, CDH1, **FH**, HNF1A, HNF4A, MDH2, **MTR**, **NVL**, POLRMT, **PRCC**, PRKAB1, **PRR3**, **RPS6KC1**, **SCYL3**, **SLC38A1**, SRPR, SRSF2, **SSR2**, **TFB2M**, TRAPPC3, **TRAPPC4**, TRAPPC6A, TUBB4, **WARS2**, **ZNF224**, **ZSCAN16**	24	16	Energy Production, Small Molecule Biochemistry, Gene Expression

NOTE. The score is a numerical value used to rank networks according to how relevant they are to the genes in the input dataset. The score takes into account the number of genes in the networks and the size of the network to approximate how relevant this network is to the input gene list. Gene symbols highlighted in bold are those included in the input gene list. The top 9 pathways were selected based on the score (score > 20)