Table S2. **Changes in gene expression following APC silencing**

GeneID	Symbol	Entrez gene name	P-value	Fold change
14613	GJA5	gap junction protein, alpha 5, 40kDa	0.000139162	10.0104
12310	CALCA	calcitonin-related polypeptide alpha	0.0000114	9.7344
381489	RXFP1	relaxin/insulin-like family peptide receptor 1	0.0000955	5.93781
27062	CADPS	Ca++-dependent secretion activator	0.000127279	5.73384
14313	FST	follistatin	0.0000202	5.50779
102371	GCOM1	GRINL1A complex locus 1	0.00144887	4.84546
242316	GDF6	growth differentiation factor 6	0.0000794	4.56858
319504	NRCAM	neuronal cell adhesion molecule	0.000429008	4.05073
12156	BMP2	bone morphogenetic protein 2	0.000127483	3.62437
379043	Raet1d/Raet1e	retinoic acid early transcript 1E	0.000285962	3.48093
13078	CYP1B1	cytochrome P450, family 1, subfamily B, polypeptide 1	0.0000856	3.39197
70536	QPCT	glutaminyl-peptide cyclotransferase	0.000446354	3.3819
73998	HERC3	HECT and RLD domain containing E3 ubiquitin protein ligase 3	0.000236794	3.33285
319476	LRTM1	leucine-rich repeats and transmembrane domains 1	0.000183572	3.28902
18600	PADI2	peptidyl arginine deiminase, type II	0.000317631	2.94752
56811	DKK2	dickkopf 2 homolog (Xenopus laevis)	0.000124152	2.93151
20893	BHLHE40	basic helix-loop-helix family, member e40	0.000348065	2.86923
74205	ACSL3	acyl-CoA synthetase long-chain family member 3	0.0000687	2.84805
80976	SYT13	synaptotagmin XIII	0.000272994	2.83652
71929	TMEM123 (includes EG:114908)	transmembrane protein 123	0.000155402	2.82831
16008	IGFBP2	insulin-like growth factor binding protein 2, 36kDa	0.0000159	2.75451
16878	LIF	leukemia inhibitory factor	0.000745022	2.72545
11861	ARL4A	ADP-ribosylation factor-like 4A	0.00000855	2.71888
18645	Pfn2	profilin 2	0.00151086	2.68286
12006	AXIN2	axin 2	0.000229797	2.67583
12350	CA3	carbonic anhydrase III, muscle specific	0.00000294	2.59775
66104	TCEAL3	transcription elongation factor A (SII)-like 3	0.00759864	2.56238
320078	OLFML2B	olfactomedin-like 2B	0.0111915	2.527
21808	TGFB2	transforming growth factor, beta 2	0.000325279	2.51958
116903	Calcb	calcitonin-related polypeptide, beta	0.00216645	2.51957
260315	NAV3	neuron navigator 3	0.0000338	2.48417
74136	SEC14L1	SEC14-like 1 (S, cerevisiae)	0.0000202	2.46523
22152	TUBB3	tubulin, beta 3 class III	0.0000345	2.46354
21838	THY1	Thy-1 cell surface antigen	0.000590575	2.44014
20502	SLC16A2	solute carrier family 16, member 2	0.00603943	2.43642

		(thyroid hormone transporter)		
238564	MYLK4	myosin light chain kinase family, member 4	0.00292528	2.41081
667281	H60b/H60c	histocompatibility 60c	0.0017185	2.39018
14573	GDNF	glial cell derived neurotrophic factor	0.000511688	2.38779
116904	ALPK3	alpha-kinase 3	0.00341546	2.38626
69564	NMRK2	nicotinamide riboside kinase 2	0.0015516	2.38296
233246	ANO5	anoctamin 5	0.000151587	2.34948
242022	FREM2	FRAS1 related extracellular matrix protein 2	0.000128029	2.34503
77018	COL25A1	collagen, type XXV, alpha 1	0.00055496	2.29612
195434	Utp14b	UTP14, U3 small nucleolar ribonucleoprotein, homolog B (yeast)	0.000489002	2.25091
26570	SLC7A11	solute carrier family 7 (anionic amino acid transporter light chain, xc- system), member 11	0.011821	2.24318
22418	WNT5A	wingless-type MMTV integration site family, member 5A	0.00252031	2.23211
545428	CCDC141	coiled-coil domain containing 141	0.00189245	2.21413
116701	FGFRL1	fibroblast growth factor receptor-like 1	0.00309149	2.21018
21417	ZEB1	zinc finger E-box binding homeobox 1	0.000193565	2.17643
14284	FOSL2	FOS-like antigen 2	0.00734607	2.1761
117600	SRGAP1	SLIT-ROBO Rho GTPase activating protein 1	0.000141465	2.16296
16909	LMO2	LIM domain only 2 (rhombotin-like 1)	0.014621	2.16197
319713	ABLIM3	actin binding LIM protein family, member 3	0.00169432	2.15517
331532	TCEAL5	transcription elongation factor A (SII)-like 5	0.00246232	2.12167
20347	SEMA3B	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3B	0.000426333	2.11929
53627	PORCN	porcupine homolog (Drosophila)	0.00147374	2.0649
17879	MYH1	myosin, heavy chain 1, skeletal muscle, adult	0.00192746	2.05954
20348	SEMA3C	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3C	0.0118369	2.05334
20271	SCN5A	sodium channel, voltage-gated, type V, alpha subunit	0.000207574	2.04768
104252	CDC42EP2	CDC42 effector protein (Rho GTPase binding) 2	0.00622925	2.02107
66898	BAIAP2L1	BAI1-associated protein 2-like 1	0.000293426	2.02071
243362	STARD13	StAR-related lipid transfer (START) domain containing 13	0.00231879	2.01646
58916	MYOT	myotilin	0.00612892	1.99201
15476	HS3ST1	heparan sulfate (glucosamine) 3-O-sulfotransferase 1	0.00226536	1.9694
20964	SYN1	synapsin I	0.000943027	1.96818
106393	SRL	sarcalumenin	0.0000677	1.96687
20897	STRA6	stimulated by retinoic acid gene 6	0.00201254	1.9652

		homolog (mouse)		
66175	MUSTN1	musculoskeletal, embryonic nuclear protein 1	0.00175942	1.96167
22437	XIRP1	xin actin-binding repeat containing 1	0.000300989	1.96164
68312	GSTM2	glutathione S-transferase mu 2 (muscle)	0.00203272	1.94437
20515	SLC20A1	solute carrier family 20 (phosphate transporter), member 1	0.0000497	1.94147
666060	FRMPD1	FERM and PDZ domain containing 1	0.000235845	1.93372
79201	Tnfrsf22/Tnfrsf23	tumor necrosis factor receptor superfamily, member 22	0.000449351	1.92875
21916	TMOD1	tropomodulin 1	0.0348894	1.92711
20411	SORBS1	sorbin and SH3 domain containing 1	0.000403342	1.92455
19716	Bex1	brain expressed gene 1	0.00113367	1.92405
20356	SEMA5A	sema domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 5A	0.000346576	1.92389
53311	MYBPH	myosin binding protein H	0.0042596	1.92183
13175	DCLK1	doublecortin-like kinase 1	0.00278589	1.91873
208618	KIAA1217	KIAA1217	0.000431922	1.91549
12053	BCL6	B-cell CLL/lymphoma 6	0.00467532	1.91125
11622	AHR	aryl hydrocarbon receptor	0.00131742	1.90913
66109	TSPAN13	tetraspanin 13	0.000303531	1.90659
238161	AKAP6	A kinase (PRKA) anchor protein 6	0.00292545	1.9037
20364	SEPW1	selenoprotein W, 1	0.0123262	1.89867
211389	SUOX	sulfite oxidase	0.0333012	1.88136
66222	SERPINB1	serpin peptidase inhibitor, clade B (ovalbumin), member 1	0.00662288	1.87678
14199	FHL1 (includes EG:14199)	four and a half LIM domains 1	0.0000592	1.87621
76895	BICD2	bicaudal D homolog 2 (Drosophila)	0.00402865	1.86341
12224	KLF5	Kruppel-like factor 5 (intestinal)	0.00335733	1.85312
21817	TGM2 (includes EG:21817)	transglutaminase 2 (C polypeptide, protein-glutamine-gamma-glutamyltransferase)	0.00414889	1.85008
68939	RASL11B	RAS-like, family 11, member B	0.0163348	1.848
73884	ZDBF2	zinc finger, DBF-type containing 2	0.00749392	1.83875
218793	UBE2E2	ubiquitin-conjugating enzyme E2E 2	0.00284904	1.83734
19012	PPAP2A	phosphatidic acid phosphatase type 2A	0.000295202	1.82814
17258	MEF2A	myocyte enhancer factor 2A	0.0130219	1.82695
72607	USP13	ubiquitin specific peptidase 13 (isopeptidase T-3)	0.0112072	1.82172
244654	MTSS1L	metastasis suppressor 1-like	0.0115043	1.81857
723817	mir-133	microRNA 133a-1	0.0000538	1.81586
24053	SGCG	sarcoglycan, gamma (35kDa dystrophin-associated glycoprotein)	0.00337368	1.81569
63828	FN3K	fructosamine 3 kinase	0.0152324	1.81135
68728	TP53INP2	tumor protein p53 inducible nuclear protein 2	0.00067951	1.81125

20856	STC2	stanniocalcin 2	0.0105618	1.80921
14360	FYN	FYN oncogene related to SRC, FGR, YES	0.0012721	1.80757
67092	GATM	glycine amidinotransferase (L-arginine:glycine amidinotransferase)	0.000161587	1.79093
30937	LMCD1	LIM and cysteine-rich domains 1	0.00132416	1.7858
53625	B3GNT2	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 2	0.0102956	1.78495
234214	SORBS2	sorbin and SH3 domain containing 2	0.00542194	1.78481
17260	MEF2C	myocyte enhancer factor 2C	0.0014967	1.78413
68802	MYPN	myopalladin	0.009179	1.78006
13371	DIO2	deiodinase, iodothyronine, type II	0.0000404	1.77988
77976	NUAK1	NUAK family, SNF1-like kinase, 1	0.00644414	1.77987
14362	FZD1	frizzled family receptor 1	0.00369572	1.77943
228357	LRP4	low density lipoprotein receptor-related protein 4	0.00833973	1.77521
21857	TIMP1	TIMP metallopeptidase inhibitor 1	0.0104079	1.7698
381339	TMEM182	transmembrane protein 182	0.00593429	1.76947
19091	PRKG1	protein kinase, cGMP-dependent, type I	0.000966223	1.76819
74013	RFTN2	raftlin family member 2	0.0147611	1.76806
18383	TNFRSF11B	tumor necrosis factor receptor superfamily, member 11b	0.00536318	1.76716
19087	PRKAR2A	protein kinase, cAMP-dependent, regulatory, type II, alpha	0.00575721	1.7665
21809	TGFB3	transforming growth factor, beta 3	0.00231163	1.76555
17906	MYL2	myosin, light chain 2, regulatory, cardiac, slow	0.00831603	1.75086
71310	TBC1D9	TBC1 domain family, member 9 (with GRAM domain)	0.00553172	1.74807
80796	CALML5	calmodulin-like 5	0.0000724	1.74794
69253	HSPB2	heat shock 27kDa protein 2	0.00124635	1.74484
19339	RAB3A	RAB3A, member RAS oncogene family	0.0172059	1.7444
382427	BEST3	bestrophin 3	0.00589558	1.74346
234593	NDRG4	NDRG family member 4	0.00144515	1.74313
78286	NAV2	neuron navigator 2	0.00502704	1.74139
20649	SNTB1	syntrophin, beta 1 (dystrophin-associated protein A1, 59kDa, basic component 1)	0.0103223	1.74025
11474	ACTN3	actinin, alpha 3	0.011472	1.73957
78248	ARMCX1	armadillo repeat containing, X-linked 1	0.00648038	1.73924
27404	ABCA8	ATP-binding cassette, sub-family A (ABC1), member 8	0.00091179	1.73011
68016	MURC	muscle-related coiled-coil protein	0.000599963	1.72391
17930	MYOM2 (includes EG:17930)	myomesin (M-protein) 2, 165kDa	0.0125097	1.72311
378431	TXLNB	taxilin beta	0.00227726	1.72227
13867	ERBB3	v-erb-b2 erythroblastic leukemia viral oncogene homolog 3 (avian)	0.0233151	1.71944
108735	SFT2D2	SFT2 domain containing 2	0.0357621	1.71931

74166	TMEM38A	transmembrane protein 38A	0.0171832	1.71796
213417	KLHDC8A	kelch domain containing 8A	0.0182051	1.716
96957	TMEM62	transmembrane protein 62	0.00261141	1.71245
108079	PRKAA2	protein kinase, AMP-activated, alpha 2 catalytic subunit	0.00567005	1.71243
93677	LMOD2	leiomodin 2 (cardiac)	0.00687628	1.71198
11472	ACTN2	actinin, alpha 2	0.00110543	1.70651
12299	CACNG1	calcium channel, voltage-dependent, gamma subunit 1	0.00244568	1.70373
12865	COX7A1	cytochrome c oxidase subunit VIIa polypeptide 1 (muscle)	0.0327936	1.69016
15394	HOXA1	homeobox A1	0.0017695	1.68817
24131	LDB3	LIM domain binding 3	0.00290847	1.68674
216198	TCP11L2	t-complex 11 (mouse)-like 2	0.0233682	1.68587
22393	WFS1	Wolfram syndrome 1 (wolframin)	0.0125994	1.68571
59006	MYOZ2	myozenin 2	0.000859941	1.68434
57754	CEND1	cell cycle exit and neuronal differentiation 1	0.00361503	1.67859
52639	WIPI1	WD repeat domain, phosphoinositide interacting 1	0.00390392	1.67561
207278	FCHSD2	FCH and double SH3 domains 2	0.00427515	1.67525
83921	TMEM2	transmembrane protein 2	0.00940257	1.67425
57339	JPH1	junctophilin 1	0.000631388	1.67413
21859	TIMP3	TIMP metallopeptidase inhibitor 3	0.00508909	1.67392
70598	FILIP1	filamin A interacting protein 1	0.0454447	1.67237
27273	PDK4	pyruvate dehydrogenase kinase, isozyme 4	0.000765111	1.67191
77674	DEFB105A/DEFB105B	defensin, beta 105A	0.0480363	1.66861
17691	SIK1	salt-inducible kinase 1	0.000733889	1.66247
12484	Cd24a	CD24a antigen	0.00418138	1.66211
13405	DMD	dystrophin	0.00321267	1.66116
387609	ZHX2	zinc fingers and homeoboxes 2	0.00222347	1.65951
52118	Pvr	poliovirus receptor	0.00019109	1.65748
13346	DES	desmin	0.0374257	1.65478
68897	DISP1	dispatched homolog 1 (Drosophila)	0.000455838	1.65307
22138	TTN	titin	0.000945821	1.65168
225845	PLA2G16	phospholipase A2, group XVI	0.00933626	1.65143
70355	GPRC5C	G protein-coupled receptor, family C, group 5, member C	0.00378024	1.65096
100213	RUSC2	RUN and SH3 domain containing 2	0.000655975	1.64941
23882	GADD45G	growth arrest and DNA-damage-inducible, gamma	0.00952236	1.6464
18604	PDK2	pyruvate dehydrogenase kinase, isozyme 2	0.0027698	1.64605
17472	Gbp4	guanylate binding protein 4	0.00545719	1.64313
23965	ODZ3	odz, odd Oz/ten-m homolog 3 (Drosophila)	0.000704112	1.643

76884	CYFIP2	cytoplasmic FMR1 interacting protein 2	0.0000666	1.64226
71436	FLRT3	fibronectin leucine rich transmembrane protein 3	0.00667861	1.63872
17281	FYCO1	FYVE and coiled-coil domain containing 1	0.00638371	1.63832
103172	CHCHD10	coiled-coil-helix-coiled-coil-helix domain containing 10	0.00056768	1.63803
14758	GPM6B	glycoprotein M6B	0.0264856	1.63688
244923	KLHL31	kelch-like 31 (Drosophila)	0.00558703	1.63674
97114	HIST2H3C (includes others)	histone cluster 2, H3c	0.0259114	1.63648
100732	MAPRE3	microtubule-associated protein, RP/EB family, member 3	0.00118456	1.63249
59069	TPM3	tropomyosin 3	0.0036305	1.63241
74480	SAMD4A	sterile alpha motif domain containing 4A	0.000129053	1.63108
23945	MGLL	monoglyceride lipase	0.0291552	1.63085
79221	Hdac9 (mouse)	histone deacetylase 9	0.0244947	1.63049
21414	TCF7	transcription factor 7 (T-cell specific, HMG-box)	0.00387154	1.63032
17883	MYH3	myosin, heavy chain 3, skeletal muscle, embryonic	0.00232444	1.62533
12292	CACNA1S	calcium channel, voltage-dependent, L type, alpha 1S subunit	0.0149537	1.62333
17938	Naca	nascent polypeptide-associated complex alpha polypeptide	0.0012099	1.62286
23959	NT5E	5'-nucleotidase, ecto (CD73)	0.0146751	1.62117
20965	SYN2	synapsin II	0.00349007	1.61601
75695	RILPL1	Rab interacting lysosomal protein-like 1	0.00923783	1.61563
73341	ARHGEF6	Rac/Cdc42 guanine nucleotide exchange factor (GEF) 6	0.00427603	1.61267
21384	TBX15	T-box 15	0.00640933	1.6116
18741	PITX2	paired-like homeodomain 2	0.00516442	1.61153
11870	ART1	ADP-ribosyltransferase 1	0.0262132	1.6085
320138	A130050O07Rik	RIKEN cDNA A130050O07 gene	0.0173964	1.608
384061	FNDC5	fibronectin type III domain containing 5	0.0027873	1.60594
12837	COL8A1	collagen, type VIII, alpha 1	0.000612025	1.60505
18175	NRAP	nebulin-related anchoring protein	0.00391728	1.60328
69219	DDAH1	dimethylarginine dimethylaminohydrolase 1	0.00133342	1.60258
74020	CPNE4	copine IV	0.0168654	1.60113
65255	ASB4	ankyrin repeat and SOCS box containing 4	0.00512895	1.60018
77480	KIDINS220	kinase D-interacting substrate, 220kDa	0.017291	1.59949
11475	ACTA2	actin, alpha 2, smooth muscle, aorta	0.00191743	1.59935
21413	TCF4	transcription factor 4	0.00839233	1.59921
380928	LMO7	LIM domain 7	0.00170705	1.59541
15464	HRC	histidine rich calcium binding protein	0.00178058	1.5953
216459	MYL6B	myosin, light chain 6B, alkali, smooth	0.00323023	1.59384

		muscle and non-muscle		
11852	RHOB	ras homolog family member B	0.00034727	1.59364
60525	ACSS2	acyl-CoA synthetase short-chain family member 2	0.0202471	1.59184
68760	SYNPO2L	synaptopodin 2-like	0.0040866	1.59131
23859	DLG2	discs, large homolog 2 (Drosophila)	0.00559549	1.5891
108151	SEMA3D	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3D	0.0268462	1.58614
13601	ECM1 (includes EG:100332249)	extracellular matrix protein 1	0.00209729	1.58382
320502	LMOD3	leiomodin 3 (fetal)	0.00062929	1.58354
16560	KIF1A	kinesin family member 1A	0.0052634	1.58261
16324	INHBB	inhibin, beta B	0.00458312	1.58145
12876	CPE	carboxypeptidase E	0.00209578	1.58022
60440	Iigp1	interferon inducible GTPase 1	0.017629	1.58015
94092	TRIM16	tripartite motif containing 16	0.00131	1.57966
73710	TUBB2B	tubulin, beta 2B class IIb	0.010933	1.57316
13617	EDNRA	endothelin receptor type A	0.0174436	1.57286
73635	Ptges3l	prostaglandin E synthase 3 (cytosolic)-like	0.0332316	1.57224
68024	HIST2H2BE (includes others)	histone cluster 2, H2be	0.0145347	1.5713
16842	LEF1	lymphoid enhancer-binding factor 1	0.00202486	1.57084
236573	Gbp6 (includes others)	guanylate binding protein 6	0.00331456	1.57043
15273	HIVEP2	human immunodeficiency virus type I enhancer binding protein 2	0.0160649	1.56883
12391	CAV3	caveolin 3	0.00330112	1.56874
11459	ACTA1	actin, alpha 1, skeletal muscle	0.0206977	1.56784
228836	DLGAP4	discs, large (Drosophila) homolog-associated protein 4	0.0000657	1.56744
241035	PKHD1	polycystic kidney and hepatic disease 1 (autosomal recessive)	0.0103972	1.56519
20257	STMN2	stathmin-like 2	0.00744066	1.5643
72333	PALLD	palladin, cytoskeletal associated protein	0.00459838	1.56382
21912	TSPAN7	tetraspanin 7	0.000174961	1.55949
78388	MVP	major vault protein	0.0100685	1.55708
56437	RRAD	Ras-related associated with diabetes	0.00979505	1.54897
68794	FLNC	filamin C, gamma	0.00869274	1.54878
217030	Synrg	synergin, gamma	0.000058	1.54861
66106	SMPX	small muscle protein, X-linked	0.0000874	1.5474
12874	CPD	carboxypeptidase D	0.0095885	1.54688
74325	CLTB	clathrin, light chain B	0.0286161	1.54646
23794	ADAMTS5	ADAM metallopeptidase with thrombospondin type 1 motif, 5	0.00184079	1.54595

791403	D830015G02Rik	RIKEN cDNA D830015G02 gene	0.0200143	1.54561
23821	BACE1	beta-site APP-cleaving enzyme 1	0.00656703	1.54517
329828	KIAA1161	KIAA1161	0.00788041	1.54477
19017	PPARGC1A	peroxisome proliferator-activated receptor gamma, coactivator 1 alpha	0.00209241	1.54196
53318	Pdlim3	PDZ and LIM domain 3	0.00116355	1.54049
69563	2310015B20Rik	RIKEN cDNA 2310015B20 gene	0.00168896	1.5389
54338	SLC23A2	solute carrier family 23 (nucleobase transporters), member 2	0.0119598	1.53783
19165	PSEN2	presenilin 2 (Alzheimer disease 4)	0.00857632	1.53727
109620	DSP	desmoplakin	0.00781287	1.53633
66734	MAP1LC3A	microtubule-associated protein 1 light chain 3 alpha	0.00681852	1.53443
11363	ACADL	acyl-CoA dehydrogenase, long chain	0.00290486	1.53352
12913	CREB3	cAMP responsive element binding protein 3	0.000419368	1.53302
19200	PSTPIP1	proline-serine-threonine phosphatase interacting protein 1	0.00517283	1.53214
17885	MYH8	myosin, heavy chain 8, skeletal muscle, perinatal	0.000986156	1.53149
207181	RBMS3	RNA binding motif, single stranded interacting protein 3	0.00230876	1.53113
12955	CRYAB	crystallin, alpha B	0.000455682	1.52976
140491	PPP1R3A	protein phosphatase 1, regulatory subunit 3A	0.00232037	1.5287
237928	PHOSPHO1	phosphatase, orphan 1	0.00354842	1.5281
12373	CASQ2	calsequestrin 2 (cardiac muscle)	0.00220554	1.52807
17884	MYH4	myosin, heavy chain 4, skeletal muscle	0.00343941	1.52606
243743	PLXNA4	plexin A4	0.0171535	1.52534
140781	MYH7	myosin, heavy chain 7, cardiac muscle, beta	0.00565161	1.52504
66659	ACP6	acid phosphatase 6, lysophosphatidic	0.0039307	1.5215
71841	1700008I05Rik	RIKEN cDNA 1700008I05 gene	0.00261098	1.52143
387565	CD300C	CD300c molecule	0.00062165	1.52016
20928	ABCC9	ATP-binding cassette, sub-family C (CFTR/MRP), member 9	0.00246201	1.51966
18198	MUSK	muscle, skeletal, receptor tyrosine kinase	0.0139482	1.51815
211945	PLEKHH1	pleckstrin homology domain containing, family H (with MyTH4 domain) member 1	0.0079588	1.51481
66139	TMEM8C	transmembrane protein 8C	0.00515523	1.51447
56421	PFKP	phosphofructokinase, platelet	0.00182749	1.51289
74100	ARPP21	cAMP-regulated phosphoprotein, 21kDa	0.0158294	1.51189
12575	CDKN1A	cyclin-dependent kinase inhibitor 1A (p21, Cip1)	0.00300226	1.51187
68813	DOCK5	dedicator of cytokinesis 5	0.0288971	1.51037
65256	ASB2	ankyrin repeat and SOCS box containing 2	0.0179391	1.51023

13982	ESR1	estrogen receptor 1	0.0391279	1.50949
13009	CSRP3	cysteine and glycine-rich protein 3 (cardiac LIM protein)	0.0010911	1.50938
16568	KIF3A	kinesin family member 3A	0.027936	1.50887
21952	TNNI1	troponin I type 1 (skeletal, slow)	0.0124095	1.50867
13197	GADD45A	growth arrest and DNA-damage-inducible, alpha	0.000706517	1.50856
17872	PPP1R15A	protein phosphatase 1, regulatory subunit 15A	0.00722251	1.50772
85031	PLA1A	phospholipase A1 member A	0.000131737	1.5066
240752	PIK3C2B	phosphoinositide-3-kinase, class 2, beta polypeptide	0.00661611	1.50621
20454	ST3GAL5	ST3 beta-galactoside alpha-2,3-sialyltransferase 5	0.00223347	1.50537
22779	IKZF2	IKAROS family zinc finger 2 (Helios)	0.0448407	1.50523
210853	ZNF548	zinc finger protein 548	0.0272629	1.50165
93960	NKD1	naked cuticle homolog 1 (Drosophila)	0.00366315	1.50069
108671	DNAJC9	DnaJ (Hsp40) homolog, subfamily C, member 9	0.00725025	-1.50019
20810	SRM	spermidine synthase	0.00195816	-1.50125
53978	LPAR2	lysophosphatidic acid receptor 2	0.00655986	-1.50349
19891	RPA2	replication protein A2, 32kDa	0.0092381	-1.50487
216829	Mmgt2	membrane magnesium transporter 2	0.00316314	-1.50599
18049	NGF	nerve growth factor (beta polypeptide)	0.00342572	-1.50632
12545	CDC7 (includes EG:12545)	cell division cycle 7 homolog (S, cerevisiae)	0.00666782	-1.50654
52626	CDKN2AIPNL	CDKN2A interacting protein N-terminal like	0.00631464	-1.5066
170753	ZNF704	zinc finger protein 704	0.00463775	-1.50676
57913	PIDD	p53-induced death domain protein	0.000708767	-1.50788
76453	PRSS23	protease, serine, 23	0.00155819	-1.50807
73327	PRADC1	protease-associated domain containing 1	0.0367675	-1.50845
66520	2610001J05Rik	RIKEN cDNA 2610001J05 gene	0.000266089	-1.51268
67144	LRRC40	leucine rich repeat containing 40	0.0000311	-1.51641
20583	SNAI2	snail homolog 2 (Drosophila)	0.00219479	-1.51831
319176	HIST2H2AC	histone cluster 2, H2ac	0.00963475	-1.51972
11764	AP1B1	adaptor-related protein complex 1, beta 1 subunit	0.001541	-1.52045
545555	Gm5853	predicted gene 5853	0.0492912	-1.52072
67865	RGS10	regulator of G-protein signaling 10	0.0246458	-1.52118
669393	Gm9457	predicted gene 9457	0.0449095	-1.52536
51788	H2AFZ	H2A histone family, member Z	0.00304177	-1.52603
21917	TMPO	thymopoietin	0.00272575	-1.52771
13178	DCK	deoxycytidine kinase	0.00155888	-1.5279
102141	SNX25	sorting nexin 25	0.0036018	-1.52862
78833	GINS3	GINS complex subunit 3 (Psf3 homolog)	0.0050487	-1.53028

50709	HIST1H1E	histone cluster 1, H1e	0.0422824	-1.53073
20197	S100A3	S100 calcium binding protein A3	0.00612537	-1.53261
29870	GTSE1	G-2 and S-phase expressed 1	0.00864012	-1.53278
53618	FUT8	fucosyltransferase 8 (alpha (1,6) fucosyltransferase)	0.00908036	-1.53284
14615	GJC1	gap junction protein, gamma 1, 45kDa	0.000195816	-1.53326
21749	TERF1	telomeric repeat binding factor (NIMA-interacting) 1	0.0137417	-1.53451
17865	MYBL2	v-myb myeloblastosis viral oncogene homolog (avian)-like 2	0.00349949	-1.5348
53881	SLC5A3	solute carrier family 5 (sodium/myo-inositol cotransporter), member 3	0.000410094	-1.53516
83398	NDST3	N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 3	0.00394338	-1.53891
20359	SEMA6B	sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6B	0.00830859	-1.53896
19659	RBP1	retinol binding protein 1, cellular	0.0181838	-1.53917
70640	DCP2 (includes EG:100534849)	DCP2 decapping enzyme homolog (S, cerevisiae)	0.00535056	-1.5403
72649	TMEM209	transmembrane protein 209	0.017549	-1.541
72486	RNF219	ring finger protein 219	0.000231334	-1.5423
51869	RIF1 (includes EG:295602)	RAP1 interacting factor homolog (yeast)	0.00183895	-1.54258
110175	GGCT	gamma-glutamylcyclotransferase	0.0293113	-1.54571
56363	TMEFF2	transmembrane protein with EGF-like and two follistatin-like domains 2	0.0112034	-1.54637
14186	FGFR4	fibroblast growth factor receptor 4	0.015615	-1.54703
234344	Gm2027/Naf1	nuclear assembly factor 1 homolog (S, cerevisiae)	0.0158892	-1.5475
12499	ENTPD5	ectonucleoside triphosphate diphosphohydrolase 5	0.0020852	-1.54814
654459	DEFB124	defensin, beta 124	0.0410987	-1.5495
12401	SERPINA6	serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 6	0.0141415	-1.55056
100503799	HMGN2	high mobility group nucleosomal binding domain 2	0.0234515	-1.5506
12144	BLM	Bloom syndrome, RecQ helicase-like	0.002074	-1.55185
319565	SYNE2	spectrin repeat containing, nuclear envelope 2	0.00177004	-1.55385
70358	STEAP1	six transmembrane epithelial antigen of the prostate 1	0.00128736	-1.55401
70385	CCDC99	coiled-coil domain containing 99	0.029331	-1.55422
326620	Hist2h4 (includes others)	histone cluster 2, H4	0.0408716	-1.55596
18576	PDE3B	phosphodiesterase 3B, cGMP-inhibited	0.00425244	-1.55688
100042069	IMPDH2	IMP (inosine 5'-monophosphate) dehydrogenase 2	0.00224177	-1.55804

22021	TPST1	tyrosylprotein sulfotransferase 1	0.00619565	-1.55883
20472	SIX2	SIX homeobox 2	0.00275897	-1.56101
21853	TIMELESS	timeless homolog (Drosophila)	0.0274066	-1.56105
65103	ARL6IP6	ADP-ribosylation-like factor 6 interacting protein 6	0.00179685	-1.56107
16881	LIG1	ligase I, DNA, ATP-dependent	0.000166998	-1.56161
66953	Cdca7	cell division cycle associated 7	0.000113247	-1.56329
66194	PYCRL	pyrroline-5-carboxylate reductase-like	0.0186863	-1.56541
57441	GMNN	geminin, DNA replication inhibitor	0.0337822	-1.56629
381306	C1orf112	chromosome 1 open reading frame 112	0.00225201	-1.56648
14841	GSG2	germ cell associated 2 (haspin)	0.017842	-1.56651
208836	FANCI	Fanconi anemia, complementation group I	0.00314066	-1.56662
244810	AW551984	expressed sequence AW551984	0.000136591	-1.5667
19362	RAD51AP1	RAD51 associated protein 1	0.000745744	-1.56722
58184	RQCD1	RCD1 required for cell differentiation1 homolog (S, pombe)	0.00406265	-1.56857
107732	MRPL10 (includes EG:107732)	mitochondrial ribosomal protein L10	0.00164619	-1.56927
14677	GNAI1	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 1	0.00185544	-1.57116
16177	IL1R1	interleukin 1 receptor, type I	0.0054712	-1.57177
20514	SLC1A5	solute carrier family 1 (neutral amino acid transporter), member 5	0.000940856	-1.5736
66191	IER3IP1	immediate early response 3 interacting protein 1	0.00352205	-1.57419
13433	DNMT1	DNA (cytosine-5-)-methyltransferase 1	0.00121442	-1.5755
66521	RWDD1	RWD domain containing 1	0.00117944	-1.57836
58207	SLC43A3	solute carrier family 43, member 3	0.0019615	-1.57961
238455	MACC1	metastasis associated in colon cancer 1	0.00828782	-1.5798
100041948	Gm9800	predicted gene 9800	0.00679265	-1.58042
68145	ETAA1	Ewing tumor-associated antigen 1	0.000730618	-1.58206
14229	FKBP5	FK506 binding protein 5	0.00231143	-1.58275
230376	HAUS6	HAUS augmin-like complex, subunit 6	0.00542685	-1.5867
110052	DEK	DEK oncogene	0.000122651	-1.58758
64074	SMOC2	SPARC related modular calcium binding 2	0.00461287	-1.58839
69928	APITD1	apoptosis-inducing, TAF9-like domain 1	0.0174779	-1.58896
18974	POLE2	polymerase (DNA directed), epsilon 2, accessory subunit	0.00060799	-1.58951
56473	FADS2	fatty acid desaturase 2	0.0023667	-1.59056
71566	CLMP	CXADR-like membrane protein	0.000701948	-1.59198
235559	TOPBP1	topoisomerase (DNA) II binding protein 1	0.000140276	-1.59433
14609	GJA1	gap junction protein, alpha 1, 43kDa	0.000965681	-1.5949
68895	RASL11A	RAS-like, family 11, member A	0.0025361	-1.59557
237221	GEMIN8	gem (nuclear organelle) associated	0.00218283	-1.59884

		protein 8		
217946	CDCA7L	cell division cycle associated 7-like	0.00967878	-1.60117
12390	CAV2	caveolin 2	0.00168136	-1.60421
27756	LSM2	LSM2 homolog, U6 small nuclear RNA associated (S, cerevisiae)	0.00457618	-1.61079
11789	APC	adenomatous polyposis coli	0.00975878	-1.61156
106344	RFC4	replication factor C (activator 1) 4, 37kDa	0.0170358	-1.61171
100529074	Snora33	small nucleolar RNA, H/ACA box 33	0.0180858	-1.61295
19736	RGS4	regulator of G-protein signaling 4	0.00176044	-1.61322
26934	RACGAP1	Rac GTPase activating protein 1	0.0141165	-1.61592
54124	CKS1B	CDC28 protein kinase regulatory subunit 1B	0.000788539	-1.61701
230594	ZCCHC11	zinc finger, CCHC domain containing 11	0.00174346	-1.61804
18005	NEK2	NIMA (never in mitosis gene a)-related kinase 2	0.00364837	-1.61862
22367	VRK1	vaccinia related kinase 1	0.00320418	-1.61897
73254	CCDC18	coiled-coil domain containing 18	0.00209631	-1.61947
17220	MCM7	minichromosome maintenance complex component 7	0.00773833	-1.62174
241627	WDR76	WD repeat domain 76	0.00874405	-1.6221
108912	CDCA2	cell division cycle associated 2	0.000234676	-1.62211
66949	TRIM59	tripartite motif containing 59	0.00321352	-1.62259
15270	H2AFX	H2A histone family, member X	0.00651738	-1.62375
20492	SLBP	stem-loop binding protein	0.00744193	-1.62423
19650	RBL1	retinoblastoma-like 1 (p107)	0.000269219	-1.62602
269582	CLSPN	claspin	0.0014411	-1.62722
66195	Lce1g	late cornified envelope 1G	0.0321382	-1.62728
13537	DUSP2	dual specificity phosphatase 2	0.00458094	-1.6278
104307	RNU12	RNA, U12 small nuclear	0.00745529	-1.62902
53381	PRDX4	peroxiredoxin 4	0.0099241	-1.62916
231123	HAUS3	HAUS augmin-like complex, subunit 3	0.0116663	-1.63444
12519	CD80 (includes EG:12519)	CD80 molecule	0.000682559	-1.63507
319180	HIST1H2BL	histone cluster 1, H2bl	0.0169671	-1.63601
66634	MCM8	minichromosome maintenance complex component 8	0.00132889	-1.63889
106582	NRM	nurim (nuclear envelope membrane protein)	0.0123911	-1.6393
30953	IQCJ-SCHIP1	IQCJ-SCHIP1 readthrough	0.0309604	-1.64363
18817	PLK1	polo-like kinase 1	0.00347358	-1.64566
12449	CCNF	cyclin F	0.00122505	-1.64576
209334	GEN1	Gen endonuclease homolog 1 (Drosophila)	0.0495063	-1.64898
13835	EPHA1	EPH receptor A1	0.00162712	-1.64997
100306944	Snora73a	small nucleolar RNA, H/ACA box 73a	0.0147846	-1.65083

12544	CDC45	cell division cycle 45 homolog (S, cerevisiae)	0.000642738	-1.65104
27528	NREP	neuronal regeneration related protein homolog (rat)	0.0057288	-1.65276
66570	CENPM	centromere protein M	0.00756723	-1.65328
319156	Hist2h4 (includes others)	histone cluster 2, H4	0.00203332	-1.65367
211666	MGST2	microsomal glutathione S-transferase 2	0.00481721	-1.65396
70218	KIF18B	kinesin family member 18B	0.000291524	-1.65423
76477	PCOLCE2 (includes EG:26577)	procollagen C-endopeptidase enhancer 2	0.000836154	-1.65773
76843	DTL	denticleless E3 ubiquitin protein ligase homolog (Drosophila)	0.000274819	-1.65845
629016	Zfp953	zinc finger protein 953	0.0197846	-1.66235
237911	BRIP1	BRCA1 interacting protein C-terminal helicase 1	0.00756502	-1.66461
106795	TCF19	transcription factor 19	0.000604611	-1.66831
66131	TIPIN	TIMELESS interacting protein	0.00234018	-1.66906
18140	UHRF1	ubiquitin-like with PHD and ring finger domains 1	0.0354907	-1.66998
16319	INCENP	inner centromere protein antigens 135/155kDa	0.00404773	-1.67026
18787	SERPINE1	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1	0.028646	-1.67174
76509	1600029D21Rik	RIKEN cDNA 1600029D21 gene	0.00430015	-1.6763
319187	HIST1H2BL	histone cluster 1, H2bl	0.00369848	-1.67731
381318	NSL1 (includes EG:25936)	NSL1, MIND kinetochore complex component, homolog (S, cerevisiae)	0.00582849	-1.68139
66226	TRAPPC2	trafficking protein particle complex 2	0.035117	-1.68272
52502	CARHSP1	calcium regulated heat stable protein 1, 24kDa	0.00227266	-1.6837
12189	BRCA1	breast cancer 1, early onset	0.000765668	-1.68666
12021	BARD1	BRCA1 associated RING domain 1	0.000786079	-1.68815
69639	EXOSC8	exosome component 8	0.000607605	-1.68933
237886	SLFN13	schlafen family member 13	0.0233733	-1.69249
74041	C11orf82	chromosome 11 open reading frame 82	0.0409056	-1.69418
50927	NASP	nuclear autoantigenic sperm protein (histone-binding)	0.000164138	-1.70256
105988	ESPL1	extra spindle pole bodies homolog 1 (S, cerevisiae)	0.00119149	-1.70307
66578	MIS18A	MIS18 kinetochore protein homolog A (S, pombe)	0.000206743	-1.70534
12557	CDH17	cadherin 17, LI cadherin (liver-intestine)	0.0158154	-1.71154
12534	CDK1	cyclin-dependent kinase 1	0.00113746	-1.71274
623474	RAD54B	RAD54 homolog B (S, cerevisiae)	0.00687065	-1.7133
19699	RELN	reelin	0.00349165	-1.71352
69706	LRR1	leucine rich repeat protein 1	0.00560736	-1.7145

107435	HAT1	histone acetyltransferase 1	0.000247509	-1.7152
104625	CNOT6	CCR4-NOT transcription complex, subunit 6	0.0005027	-1.71761
665903	Gm7846	predicted gene 7846	0.0202075	-1.71961
17231	Mcpt8	mast cell protease 8	0.00875095	-1.72007
17219	MCM6	minichromosome maintenance complex component 6	0.00091659	-1.72171
69071	TMEM97	transmembrane protein 97	0.00933744	-1.72532
100217426	Snord49b	small nucleolar RNA, C/D box 49B	0.0305155	-1.72776
114672	1700007E05Rik	RIKEN cDNA 1700007E05 gene	0.0195568	-1.7295
16796	LASP1	LIM and SH3 protein 1	0.0000896	-1.73111
13361	DHFR	dihydrofolate reductase	0.00054634	-1.73183
70472	ATAD2	ATPase family, AAA domain containing 2	0.000915289	-1.73209
22329	VCAM1	vascular cell adhesion molecule 1	0.000516331	-1.73278
23834	CDC6 (includes EG:23834)	cell division cycle 6 homolog (S, cerevisiae)	0.0232603	-1.73515
212377	MMS22L	MMS22-like, DNA repair protein	0.00367329	-1.73794
22390	WEE1	WEE1 homolog (S, pombe)	0.00452515	-1.73814
17470	CD200	CD200 molecule	0.00157532	-1.73822
13605	ECT2	epithelial cell transforming sequence 2 oncogene	0.000705838	-1.74049
70099	SMC4	structural maintenance of chromosomes 4	0.000390878	-1.74063
75623	TEX30	testis expressed 30	0.0000561	-1.74455
215387	NCAPH	non-SMC condensin I complex, subunit H	0.00112793	-1.74544
67121	MASTL	microtubule associated serine/threonine kinase-like	0.0102049	-1.74577
72787	TMEM48	transmembrane protein 48	0.010715	-1.7483
66336	CENPP	centromere protein P	0.00408887	-1.74937
12190	BRCA2	breast cancer 2, early onset	0.000799144	-1.74938
208628	KNTC1	kinetochore associated 1	0.00812122	-1.75399
258216	OR5M9	olfactory receptor, family 5, subfamily M, member 9	0.028111	-1.75431
56419	DIAPH3	diaphanous homolog 3 (Drosophila)	0.004639	-1.75914
228421	KIF18A	kinesin family member 18A	0.0190174	-1.75922
319186	HIST1H2BD	histone cluster 1, H2bd	0.00224636	-1.76065
17289	MERTK	c-mer proto-oncogene tyrosine kinase	0.00214402	-1.76314
12649	CHEK1	checkpoint kinase 1	0.00000819	-1.76446
108000	CENPF	centromere protein F, 350/400kDa (mitosin)	0.00017808	-1.76468
218977	DLGAP5	discs, large (Drosophila) homolog-associated protein 5	0.00429536	-1.76698
225995	C9orf40	chromosome 9 open reading frame 40	0.00521728	-1.77382
72544	EXOSC6	exosome component 6	0.0101964	-1.77728

19366	RAD54L	RAD54-like (S, cerevisiae)	0.00134737	-1.77815
83815	CENPQ	centromere protein Q	0.0163273	-1.77949
77011	C15orf42	chromosome 15 open reading frame 42	0.0030939	-1.77991
16906	LMNB1	lamin B1	0.00307135	-1.78305
234258	NEIL3	nei endonuclease VIII-like 3 (E, coli)	0.0000351	-1.78457
20873	PLK4	polo-like kinase 4	0.000391729	-1.7856
72155	CENPN	centromere protein N	0.00271371	-1.78638
319182	HIST1H2BM	histone cluster 1, H2bm	0.000492731	-1.78797
97122	Hist2h4 (includes others)	histone cluster 2, H4	0.00114752	-1.79144
15366	HMMR	hyaluronan-mediated motility receptor (RHAMM)	0.00750707	-1.80083
107995	CDC20 (includes EG:107995)	cell division cycle 20 homolog (S, cerevisiae)	0.000699217	-1.80233
71876	MLF1IP	MLF1 interacting protein	0.00634726	-1.80302
12904	CRABP2	cellular retinoic acid binding protein 2	0.00392568	-1.80744
74107	CEP55	centrosomal protein 55kDa	0.00618782	-1.81025
14235	FOXM1	forkhead box M1	0.00847578	-1.81191
70466	CKAP2L	cytoskeleton associated protein 2-like	0.00255785	-1.81428
320910	ITGB8	integrin, beta 8	0.00388654	-1.81544
20603	SMS	spermine synthase	0.0141356	-1.8161
19348	KIF20A	kinesin family member 20A	0.0019061	-1.81796
69716	TRIP13	thyroid hormone receptor interactor 13	0.00185628	-1.82151
224405	CYYR1	cysteine/tyrosine-rich 1	0.00184819	-1.82411
21335	TACC3	transforming, acidic coiled-coil containing protein 3	0.000488569	-1.82455
68298	NCAPD2	non-SMC condensin I complex, subunit D2	0.0000555	-1.82483
17427	MNS1	meiosis-specific nuclear structural 1	0.000716935	-1.828
12236	BUB1B	budding uninhibited by benzimidazoles 1 homolog beta (yeast)	0.00135195	-1.82804
12532	CDC25C	cell division cycle 25 homolog C (S, pombe)	0.0139286	-1.83055
18973	POLE	polymerase (DNA directed), epsilon, catalytic subunit	0.000591269	-1.83254
66471	ANP32E	acidic (leucine-rich) nuclear phosphoprotein 32 family, member E	0.000807137	-1.83301
20088	RPS24	ribosomal protein S24	0.0227385	-1.83419
319183	HIST1H2BL	histone cluster 1, H2bl	0.00273548	-1.83424
268465	EME1	essential meiotic endonuclease 1 homolog 1 (S, pombe)	0.000474514	-1.8361
218973	WDHD1	WD repeat and HMG-box DNA binding protein 1	0.000056	-1.84368
17864	MYBL1	v-myb myeloblastosis viral oncogene homolog (avian)-like 1	0.00553324	-1.84512
66468	SKA1	spindle and kinetochore associated complex subunit 1	0.0146459	-1.84603
70454	CENPL	centromere protein L	0.0165159	-1.84663

17294	MEST	mesoderm specific transcript homolog (mouse)	0.00159512	-1.84717
67629	SPC24 (includes EG:147841)	SPC24, NDC80 kinetochore complex component, homolog (S, cerevisiae)	0.00221977	-1.84904
27214	DBF4 (includes EG:10926)	DBF4 homolog (S, cerevisiae)	0.0131154	-1.85134
71988	ESCO2	establishment of cohesion 1 homolog 2 (S, cerevisiae)	0.00361233	-1.85197
20878	AURKA	aurora kinase A	0.0000116	-1.85246
100217428	Snord57	small nucleolar RNA, C/D box 57	0.0358432	-1.85847
56150	MAD2L1	MAD2 mitotic arrest deficient-like 1 (yeast)	0.00925095	-1.85865
319169	Hist1h2ak	histone cluster 1, H2ak	0.00235578	-1.85884
72119	TPX2	TPX2, microtubule-associated, homolog (Xenopus laevis)	0.00123349	-1.86032
20135	RRM2	ribonucleotide reductase M2	0.00158597	-1.86066
51944	C15orf23	chromosome 15 open reading frame 23	0.00278667	-1.86457
70546	ZDHHC2	zinc finger, DHHC-type containing 2	0.00696158	-1.86494
100217418	Snora44	small nucleolar RNA, H/ACA box 44	0.0268934	-1.86743
54141	SPAG5	sperm associated antigen 5	0.000809323	-1.87198
60530	FIGNL1	fidgetin-like 1	0.00265036	-1.87416
69270	GINS1	GINS complex subunit 1 (Psf1 homolog)	0.00440366	-1.88505
18968	POLA1	polymerase (DNA directed), alpha 1, catalytic subunit	0.000707419	-1.88928
66929	ASF1B	ASF1 anti-silencing function 1 homolog B (S, cerevisiae)	0.00647675	-1.89373
80838	HIST1H1A	histone cluster 1, H1a	0.0000407	-1.89537
236930	ERCC6L	excision repair cross-complementing rodent repair deficiency, complementation group 6-like	0.0000502	-1.90857
14156	FEN1	flap structure-specific endonuclease 1	0.00420318	-1.91094
12447	CCNE1	cyclin E1	0.000507915	-1.91188
19737	RGS5	regulator of G-protein signaling 5	0.0000707	-1.9138
12615	CENPA	centromere protein A	0.0000786	-1.91507
229841	CENPE	centromere protein E, 312kDa	0.000417236	-1.91633
12442	CCNB2	cyclin B2	0.00195287	-1.91649
20937	SUV39H1	suppressor of variegation 3-9 homolog 1 (Drosophila)	0.0000811	-1.92199
20419	SHCBP1	SHC SH2-domain binding protein 1	0.000171568	-1.9239
17217	MCM4	minichromosome maintenance complex component 4	0.000178922	-1.92518
81535	SGPP1	sphingosine-1-phosphate phosphatase 1	0.00232527	-1.93047
22171	TYMS	thymidylate synthetase	0.000246501	-1.9365
15201	HELLS	helicase, lymphoid-specific	0.000445735	-1.93682
22137	TTK	TTK protein kinase	0.00141935	-1.93685

75317	PARPBP	PARP1 binding protein	0.0145418	-1.93744
77744	BORA	bora, aurora kinase A activator	0.00264211	-1.93883
18227	NR4A2	nuclear receptor subfamily 4, group A, member 2	0.000563043	-1.95309
102920	CENPI	centromere protein I	0.000459651	-1.95488
237082	NXT2	nuclear transport factor 2-like export factor 2	0.00288899	-1.95676
67849	CDCA5	cell division cycle associated 5	0.0367251	-1.95798
67052	NDC80	NDC80 kinetochore complex component homolog (S, cerevisiae)	0.0039715	-1.96273
68612	UBE2C	ubiquitin-conjugating enzyme E2C	0.000283788	-1.96273
52276	CDCA8	cell division cycle associated 8	0.00523444	-1.96542
26909	EXO1 (includes EG:26909)	exonuclease 1	0.000847912	-1.96855
71878	FAM83D	family with sequence similarity 83, member D	0.00344711	-1.96857
214968	SEMA6D	sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6D	0.0000164	-1.96859
68743	ANLN	anillin, actin binding protein	0.000800437	-1.97172
20460	STIL	SCL/TAL1 interrupting locus	0.0138745	-1.97304
110074	DUT	deoxyuridine triphosphatase	0.000886517	-1.97482
319155	Hist2h4 (includes others)	histone cluster 2, H4	0.0223919	-1.97484
66442	SPC25 (includes EG:100144563)	SPC25, NDC80 kinetochore complex component, homolog (S, cerevisiae)	0.00342033	-1.97572
71819	KIF23	kinesin family member 23	0.000433666	-1.97646
68549	SGOL2	shugoshin-like 2 (S, pombe)	0.00339604	-1.97876
19361	RAD51	RAD51 homolog (S, cerevisiae)	0.000582265	-1.98078
26886	CENPH	centromere protein H	0.00158114	-1.98111
17279	MELK	maternal embryonic leucine zipper kinase	0.0000166	-1.98786
21973	TOP2A	topoisomerase (DNA) II alpha 170kDa	0.00384942	-1.99042
76915	MND1 (includes EG:295160)	meiotic nuclear divisions 1 homolog (S, cerevisiae)	0.017283	-2.00352
240641	KIF20B	kinesin family member 20B	0.0000317	-2.00373
54140	AVPR1A	arginine vasopressin receptor 1A	0.00388708	-2.00718
12316	ASPM	asp (abnormal spindle) homolog, microcephaly associated (Drosophila)	0.0000615	-2.01921
224171	KIAA1524	KIAA1524	0.00270572	-2.0196
108907	NUSAP1	nucleolar and spindle associated protein 1	0.00229453	-2.02429
68014	ZWILCH	Zwilch, kinetochore associated, homolog (Drosophila)	0.00099542	-2.02503
56702	HIST1H1B	histone cluster 1, H1b	0.000913538	-2.02534

20877	AURKB	aurora kinase B	0.0000224	-2.02949
54392	NCAPG	non-SMC condensin I complex, subunit G	0.0010791	-2.03705
72415	SGOL1	shugoshin-like 1 (S, pombe)	0.000109904	-2.03744
52009	HN1L	hematological and neurological expressed 1-like	0.000622303	-2.0392
110312	PMCH	pro-melanin-concentrating hormone	0.0363695	-2.04138
217653	MIS18BP1	MIS18 binding protein 1	0.000411179	-2.04544
100306945	Snora73b	small nucleolar RNA, H/ACA box 73b	0.000049	-2.06587
14211	SMC2	structural maintenance of chromosomes 2	0.000929779	-2.07674
11799	BIRC5	baculoviral IAP repeat containing 5	0.000253301	-2.09193
80986	CKAP2	cytoskeleton associated protein 2	0.00114758	-2.09417
270906	PRR11	proline rich 11	0.00927803	-2.10289
76044	NCAPG2	non-SMC condensin II complex, subunit G2	0.000575951	-2.10508
228482	ARHGAP11A	Rho GTPase activating protein 11A	0.00097615	-2.12023
219114	SKA3	spindle and kinetochore associated complex subunit 3	0.00217176	-2.12382
12448	CCNE2	cyclin E2	0.00142332	-2.12778
16551	KIF11	kinesin family member 11	0.000508656	-2.13212
319189	HIST2H2BF	histone cluster 2, H2bf	0.00925049	-2.16045
319172	HIST1H2AB/HIST1H2AE	histone cluster 1, H2ae	0.0277456	-2.16449
17345	MKI67	antigen identified by monoclonal antibody Ki-67	0.000027	-2.18479
107373	FAM111A	family with sequence similarity 111, member A	0.000647876	-2.196
13723	EMB	embigin	0.000428365	-2.20613
225887	NDUFS8	NADH dehydrogenase (ubiquinone) Fe-S protein 8, 23kDa (NADH-coenzyme Q reductase)	0.000173651	-2.21006
233406	PRC1 (includes EG:233406)	protein regulator of cytokinesis 1	0.0011914	-2.23144
14793	CDCA3	cell division cycle associated 3	0.00124908	-2.23684
209737	KIF15	kinesin family member 15	0.000189367	-2.24499
12428	CCNA2	cyclin A2	0.000672474	-2.25298
104369	SNORA69	small nucleolar RNA, H/ACA box 69	0.00711612	-2.26463
12140	FABP7	fatty acid binding protein 7, brain	0.00199771	-2.29518
76464	CASC5	cancer susceptibility candidate 5	0.000327956	-2.33329
20274	SCN9A	sodium channel, voltage-gated, type IX, alpha subunit	0.000086	-2.34816
66977	NUF2	NUF2, NDC80 kinetochore complex component, homolog (S, cerevisiae)	0.000336183	-2.35582
19075	PRIM1	primase, DNA, polypeptide 1 (49kDa)	0.00160035	-2.36631
67141	FBXO5	F-box protein 5	0.0000186	-2.36786
16571	KIF4A	kinesin family member 4A	0.00000268	-2.37402
20315	Cxcl12	chemokine (C-X-C motif) ligand 12	0.000487933	-2.37507

73804	KIF2C	kinesin family member 2C	0.000130751	-2.43584
100043123	Cd300lh (includes others)	CD300 antigen like family member H	0.0137798	-2.55116
60411	CENPK	centromere protein K	0.0058706	-2.69654
19243	PTP4A1	protein tyrosine phosphatase type IVA, member 1	0.00238741	-2.69731
12235	BUB1 (includes EG:100307076)	budding uninhibited by benzimidazoles 1 homolog (yeast)	0.00136081	-2.79453
52033	PBK	PDZ binding kinase	0.0050121	-2.90122
215029	Prl3d1 (includes others)	prolactin family 3, subfamily d, member 1	0.0164364	-3.04551

Supplementary Table 2

Category	Term	Count	PValue	Fold Enrichment	Bonferroni	Benjamini	FDR
Molecular Function	GO:0000166 nucleotide binding	109	2.30E-07	1.60	1.26E-04	1.26E-05	3.36E-04
	GO:0017076 purine nucleotide binding	101	1.69E-08	1.73	9.22E-06	1.02E-06	2.46E-05
	GO:0032553 ribonucleotide binding	99	8.73E-09	1.77	4.77E-06	6.82E-07	1.27E-05
	GO:0032555 purine ribonucleotide binding	99	8.73E-09	1.77	4.77E-06	6.82E-07	1.27E-05
	GO:0001882 nucleoside binding	91	2.63E-09	1.87	1.44E-06	7.20E-07	3.84E-06
	GO:0001883 purine nucleoside binding	90	4.25E-09	1.87	2.33E-06	7.75E-07	6.20E-06
	GO:0030554 adenyl nucleotide binding	88	1.30E-08	1.84	7.13E-06	8.92E-07	1.90E-05
	GO:0003677 DNA binding	87	1.51E-05	1.57	8.25E-03	6.37E-04	2.21E-02
	GO:0032559 adenyl ribonucleotide binding	86	5.76E-09	1.89	3.15E-06	7.88E-07	8.40E-06
	GO:0005524 ATP binding	85	7.31E-09	1.89	4.00E-06	6.66E-07	1.07E-05
Cellular Component	GO:0043228 non-membrane-bounded organelle	160	2.94E-33	2.59	1.03E-30	3.44E-31	4.02E-30
	GO:0043232 intracellular non-membrane-bounded organelle	160	2.94E-33	2.59	1.03E-30	3.44E-31	4.02E-30
	GO:0005856 cytoskeleton	95	7.81E-19	2.63	2.74E-16	3.05E-17	1.07E-15
	GO:0005694 chromosome	78	9.00E-41	6.40	3.16E-38	3.16E-38	1.23E-37
	GO:0044430 cytoskeletal part	70	5.06E-15	2.81	1.79E-12	1.28E-13	6.98E-12
	GO:0044427 chromosomal part	69	2.41E-37	6.73	8.46E-35	4.23E-35	3.30E-34
	GO:0015630 microtubule cytoskeleton	48	7.06E-13	3.31	2.48E-10	1.55E-11	9.66E-10
	GO:0000775 chromosome. centromeric region	42	4.50E-33	11.74	1.58E-30	3.95E-31	6.15E-30
	GO:0000793	33	9.69E-23	9.57	3.40E-20	6.81E-21	1.33E-19

	condensed chromosome						
	GO:0043292 contractile fiber	28	9.93E-19	9.14	3.49E-16	3.49E-17	1.36E-15
Biological Process	GO:0007049 cell cycle	111	1.46E-50	5.35	3.20E-47	3.20E-47	2.53E-47
	GO:0022402 cell cycle process	85	3.19E-44	6.38	6.99E-41	1.75E-41	5.54E-41
	GO:0022403 cell cycle phase	81	1.10E-46	7.28	2.41E-43	8.02E-44	1.91E-43
	GO:0000279 M phase	77	1.30E-47	8.02	2.85E-44	1.42E-44	2.26E-44
	GO:0051301 cell division	73	1.53E-43	7.66	3.35E-40	5.58E-41	2.65E-40
	GO:0000278 mitotic cell cycle	68	1.31E-42	8.21	2.87E-39	4.11E-40	2.28E-39
	GO:0000087 M phase of mitotic cell cycle	63	7.62E-44	9.57	1.67E-40	3.34E-41	1.32E-40
	GO:0007067 mitosis	61	4.33E-42	9.46	9.50E-39	1.19E-39	7.53E-39
	GO:0000280 nuclear division	61	4.33E-42	9.46	9.50E-39	1.19E-39	7.53E-39
	GO:0048285 organelle fission	61	4.67E-41	9.13	1.03E-37	1.14E-38	8.12E-38