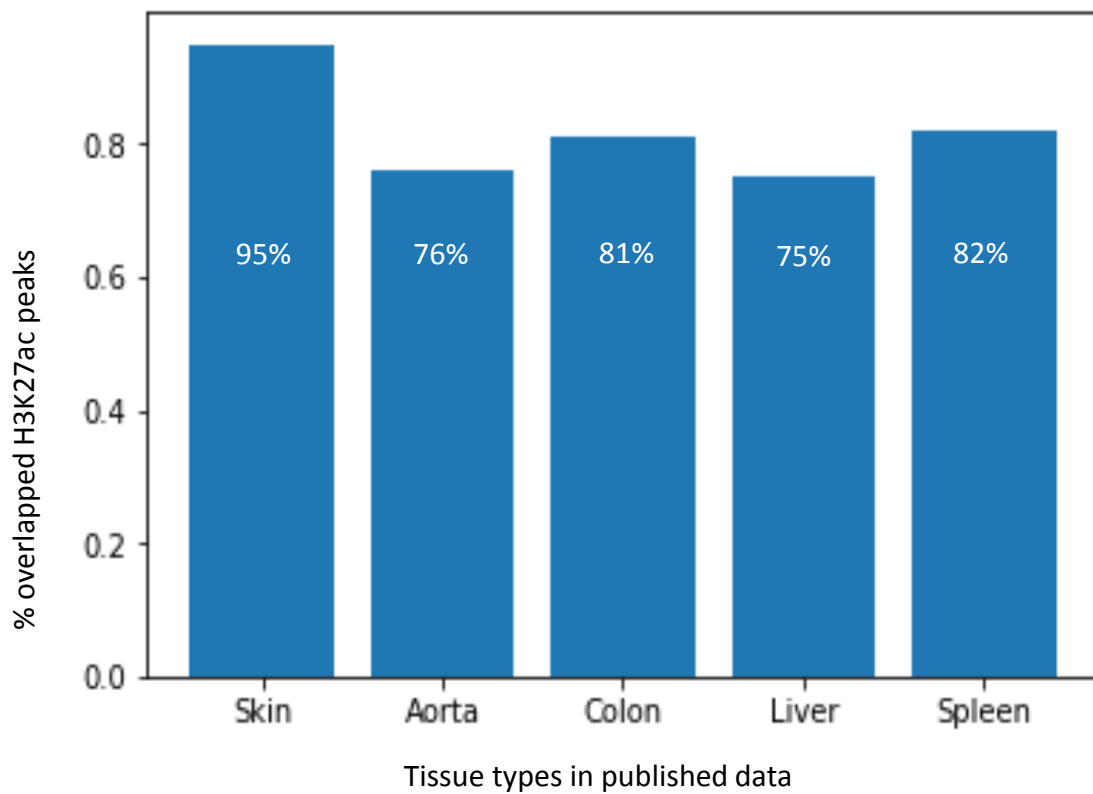
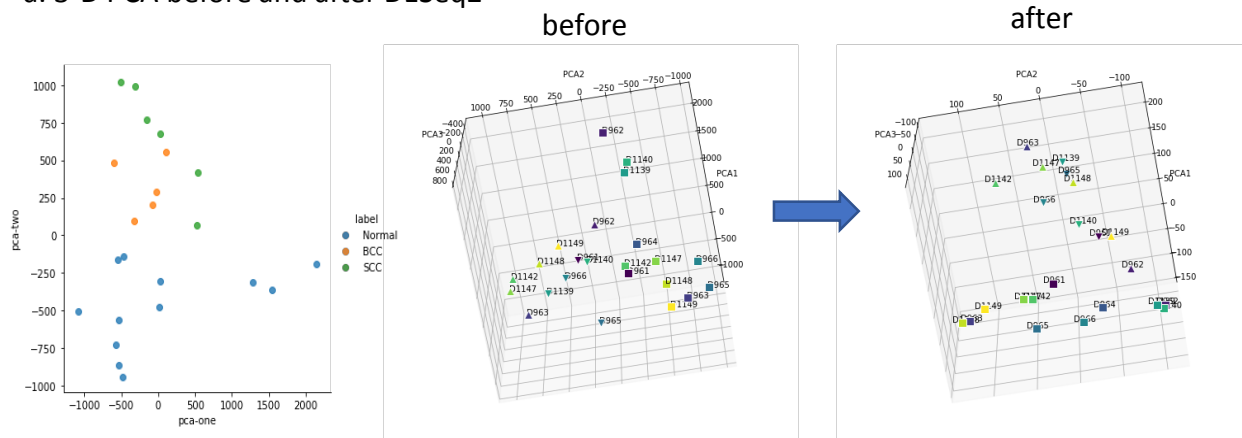


**Supplementary Figure 1.** Percentage of H3K27ac peaks in the public available data overlapping with the patient normal samples.

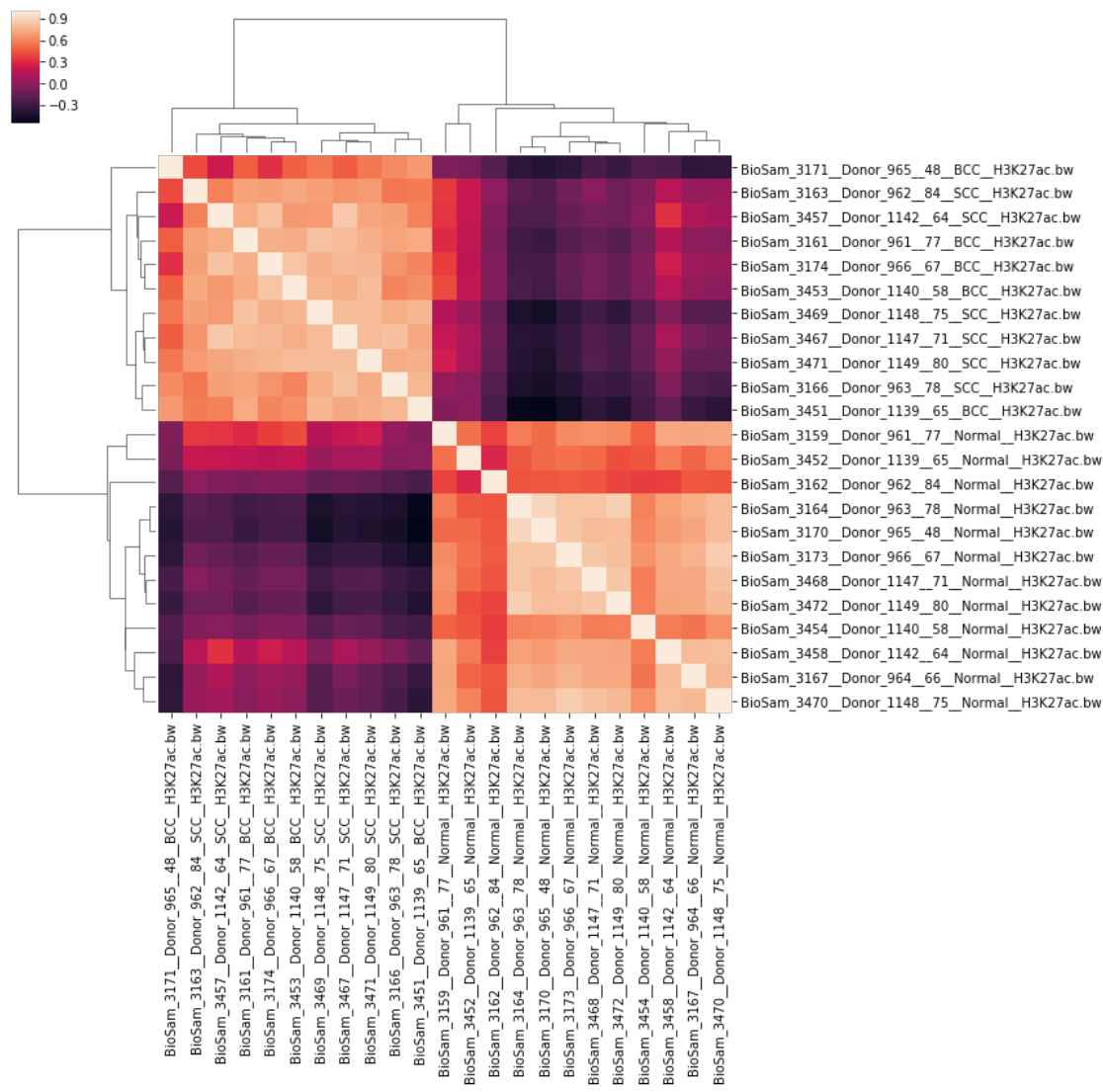


**Supplementary Figure 2.** H3K27ac specific regions for SCC and BCC separate the normal and cancer samples. (a) principal components analysis (PCA) shows the separation of samples before and after differential peak analysis from DESeq2, and (b) Heatmap shows the clustering of normal and cancer samples after after differential peak analysis from DESeq2.

a. 3-D PCA before and after DESeq2

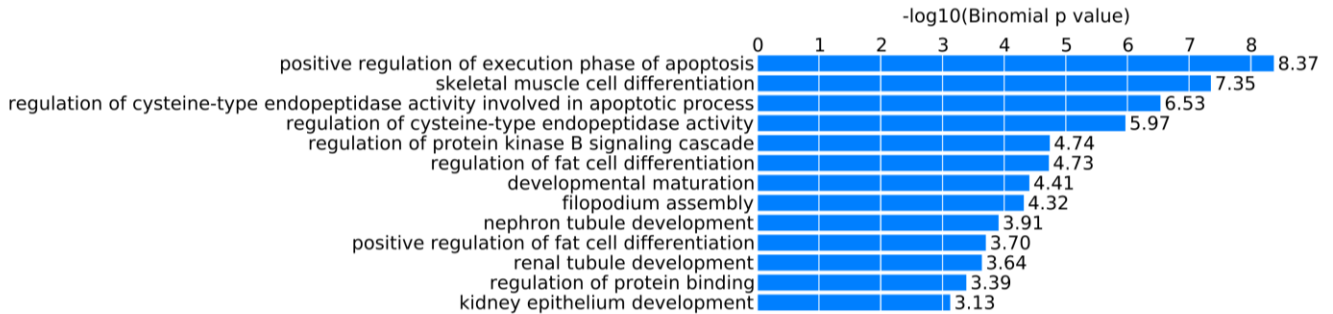


b. Heatmap sample classification after DESeq2

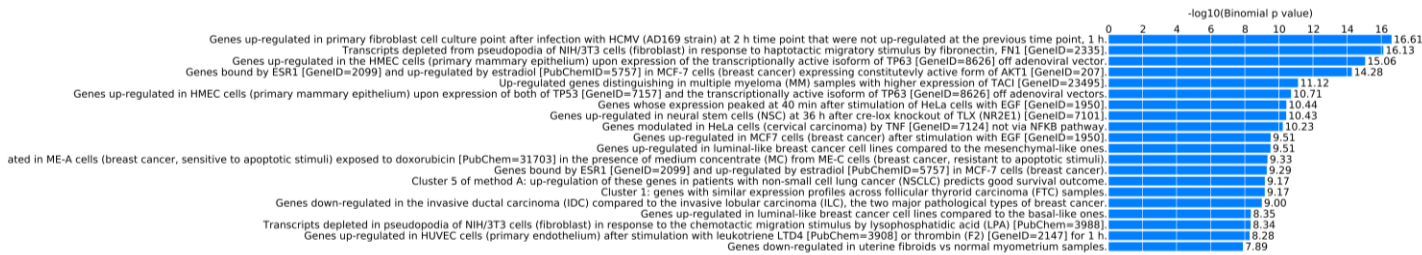


# Supplementary Figure 3. GREAT analyses on H3K27ac down regulated SCC: (a) SCC down-regulated Biological Process and (b) SCC down-regulated MsigDB perturbation signatures

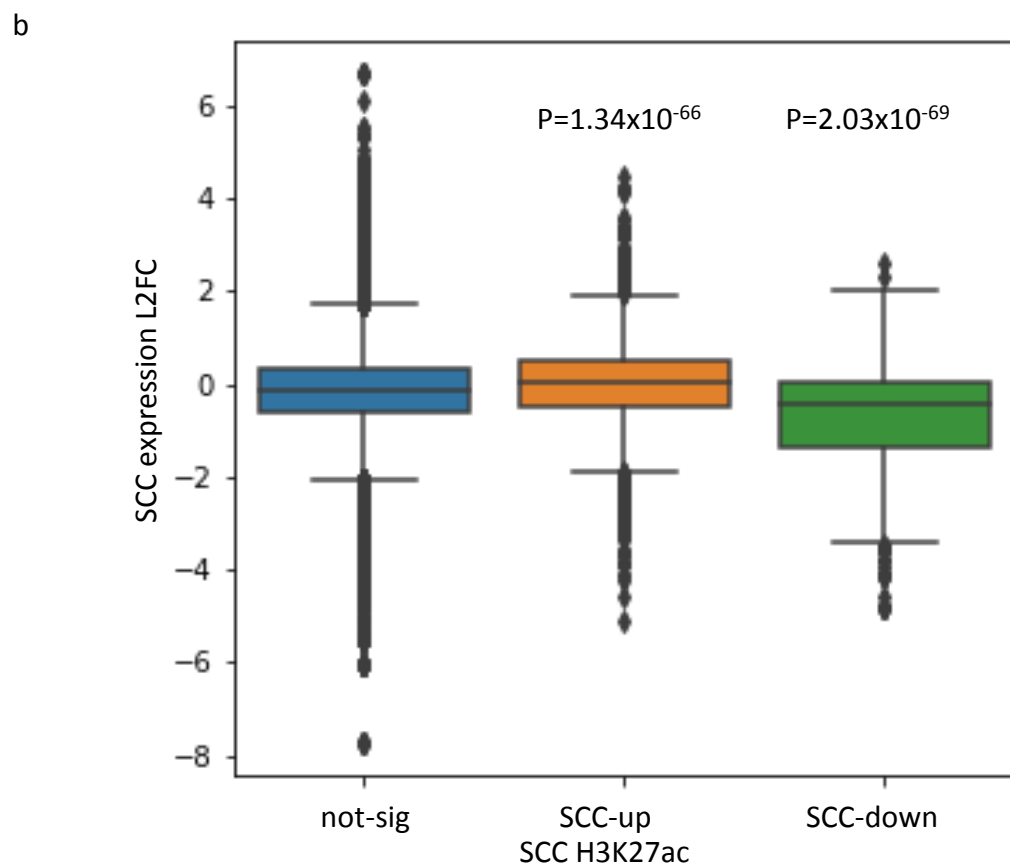
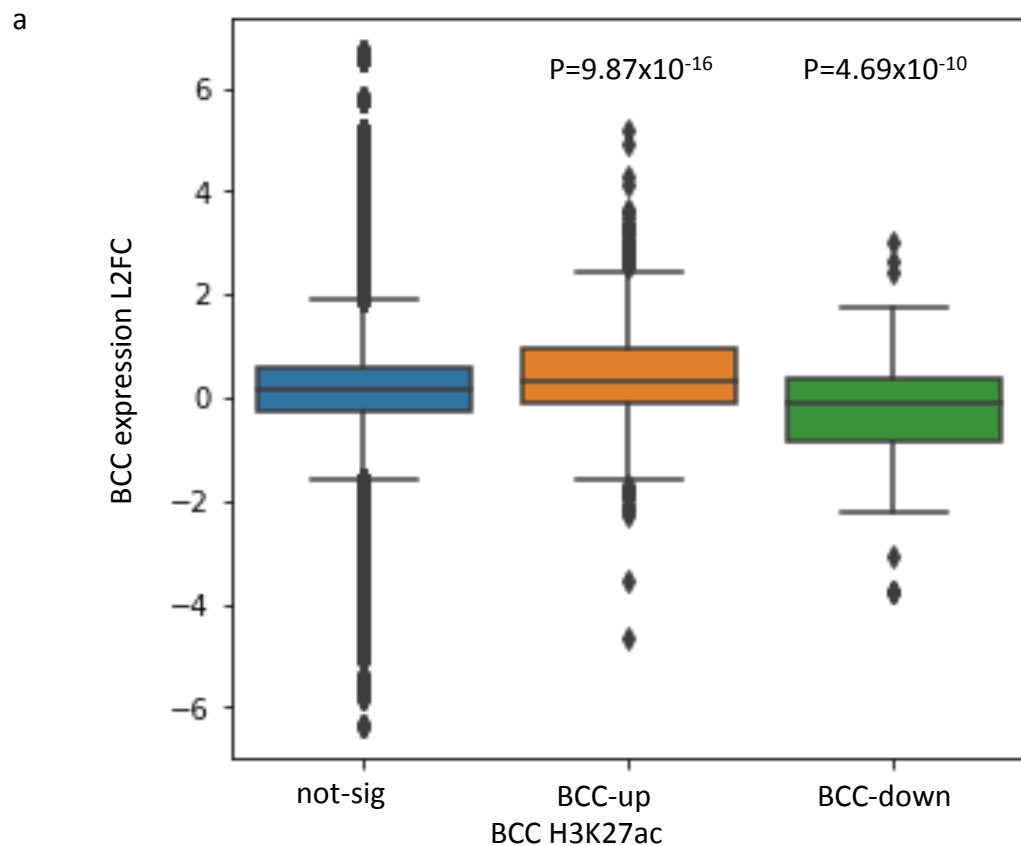
## a. SCC down-regulated Biological Process



## b. SCC down-regulated MsigDB perturbation signatures

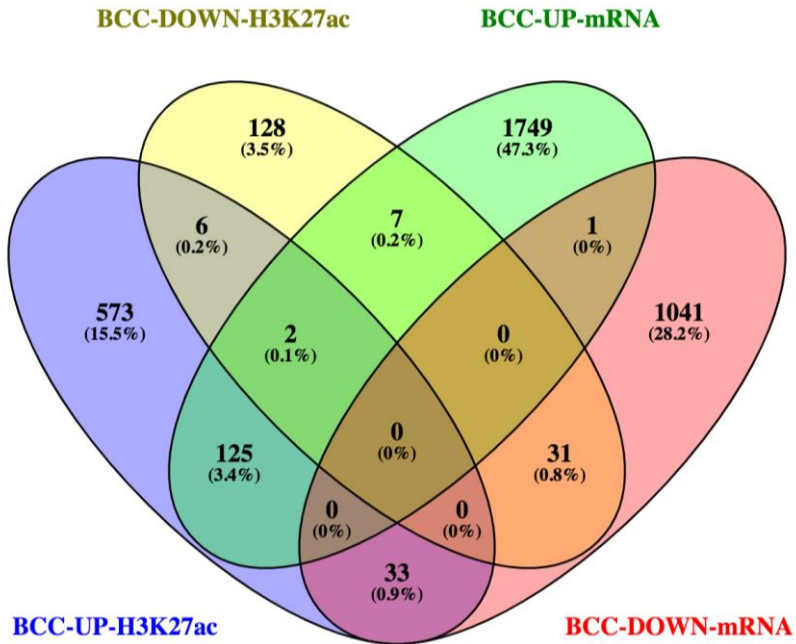


**Supplementary Figure 4.** Relationship between H3K27ac peaks and putative target gene expressions from published data of (a) BCC and (b) SCC

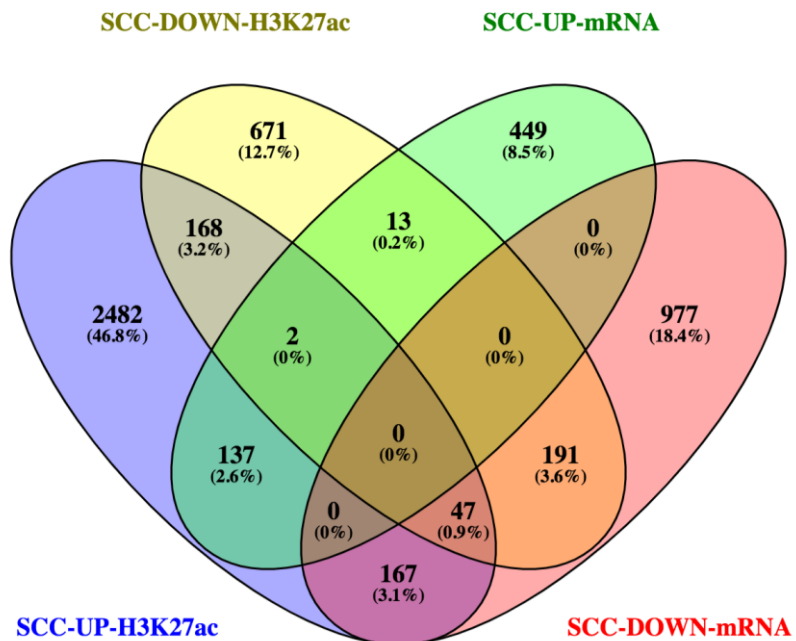


**Supplementary Figure 5.** Venn diagrams show the number of overlapped genes near significantly regulated H3K27ac peaks and mRNA expressions in (a) BCC samples and (b) SCC samples.

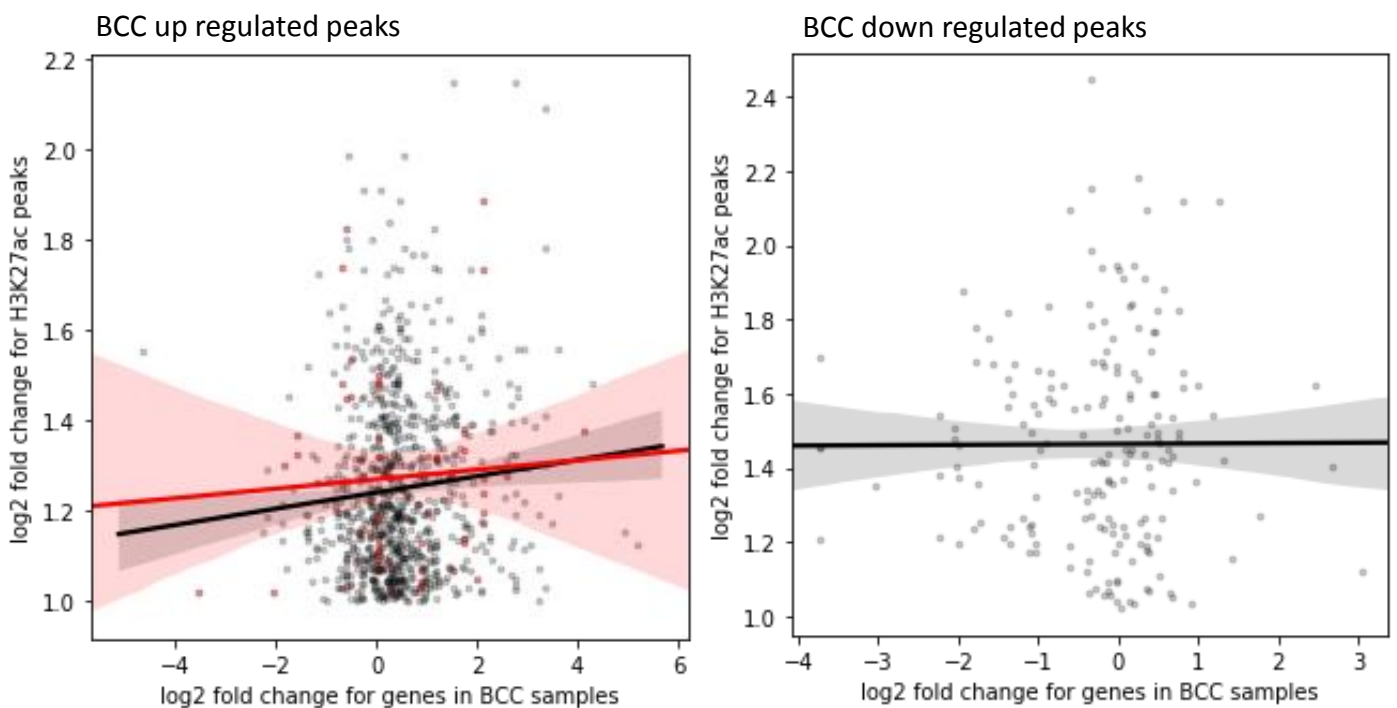
a



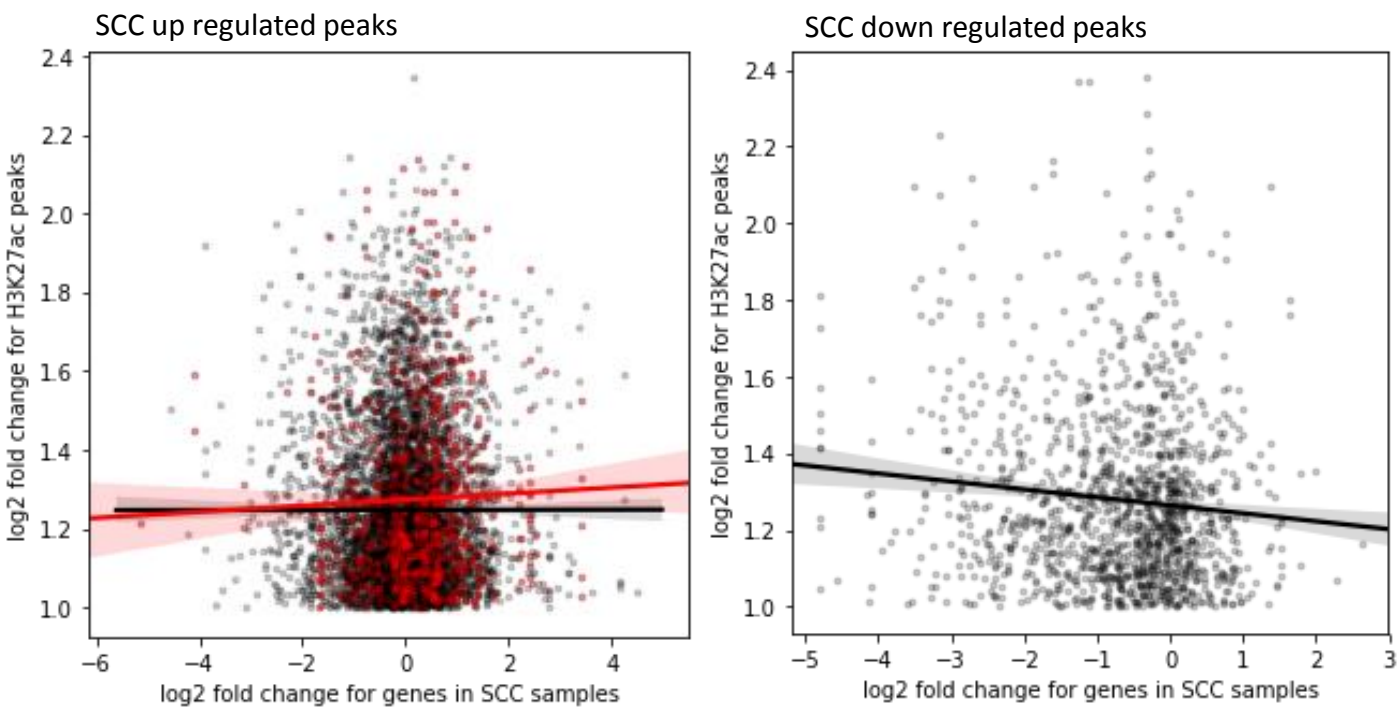
b



## Supplementary Figure 6. Trends between significant cancer-specific H3K27ac peaks and putative gene expressions

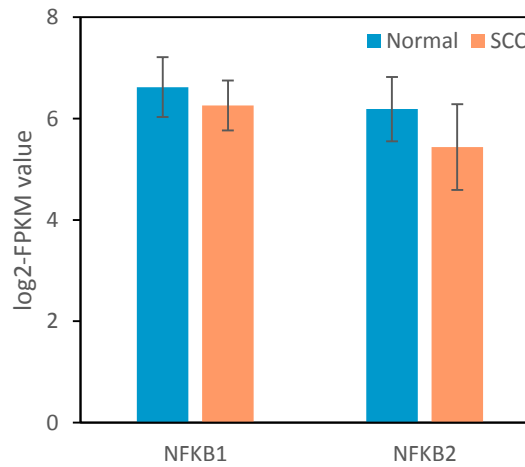
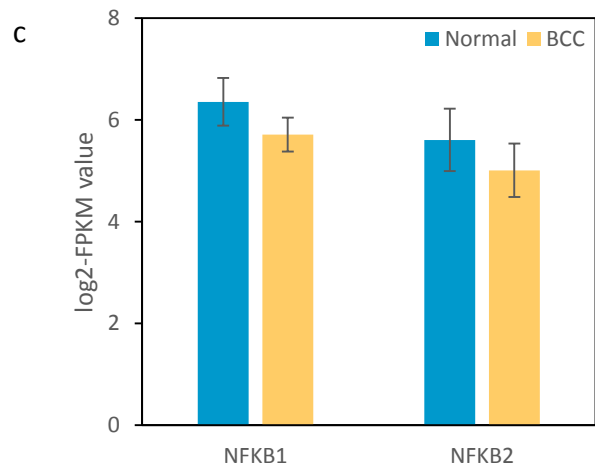
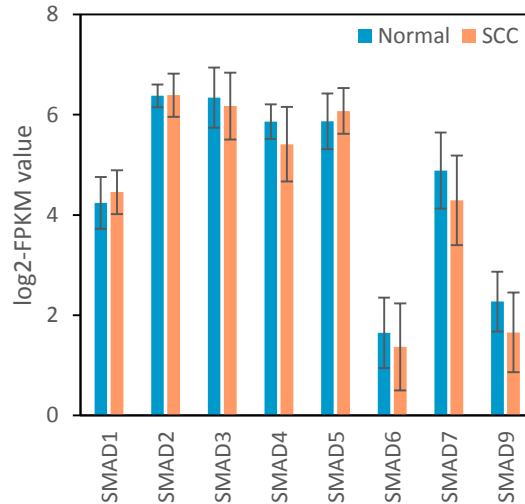
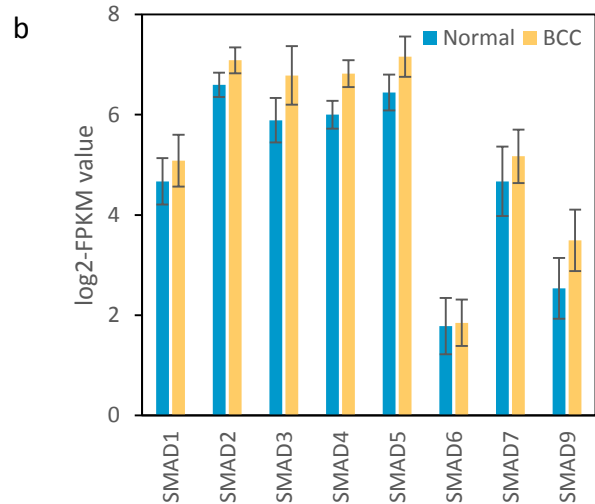
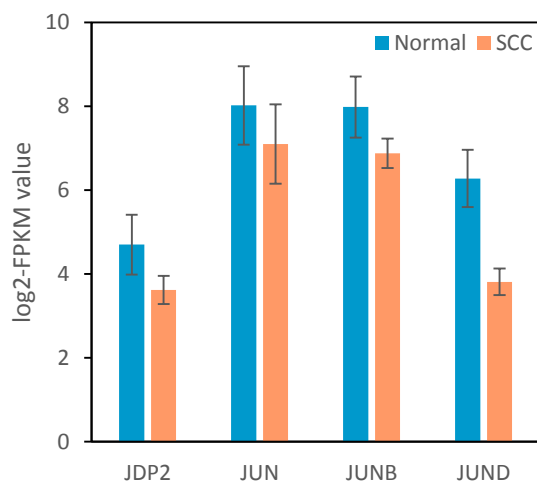
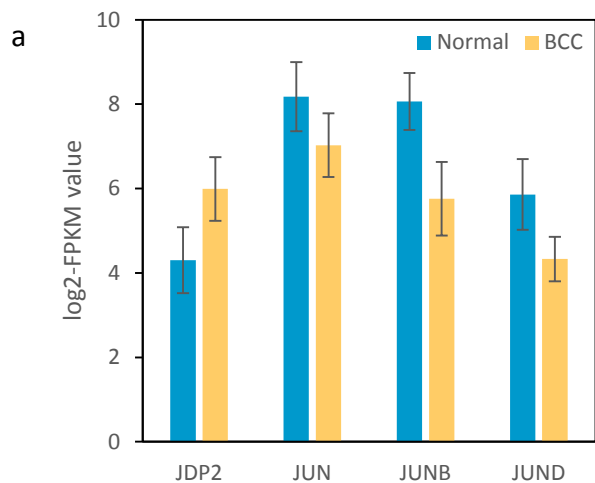


\*Red: genes in GO:0043588 (skin development)



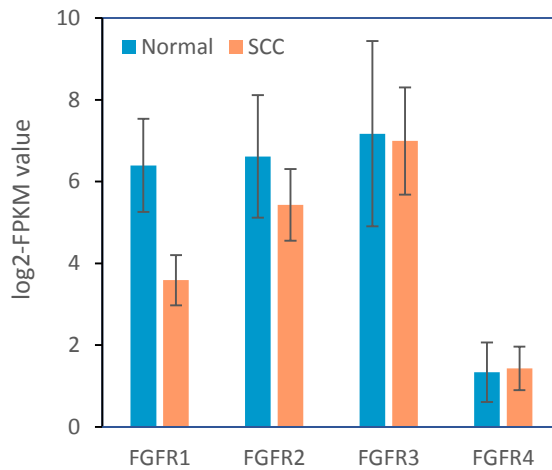
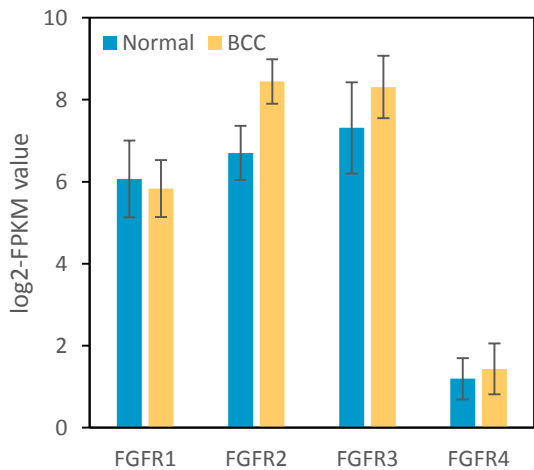
\*Red: genes in GO:0002682 (immune response)

**Supplementary Figure 7.** gene expression for family genes: (a) JUN, (b) SMAD, (c) NFKB, (d) FGFR, and (e) WNT

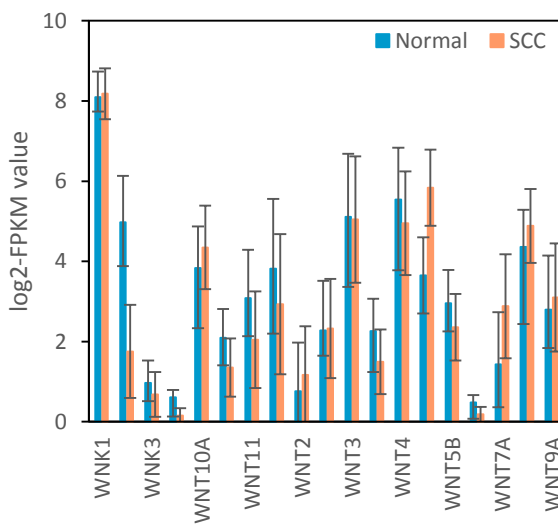
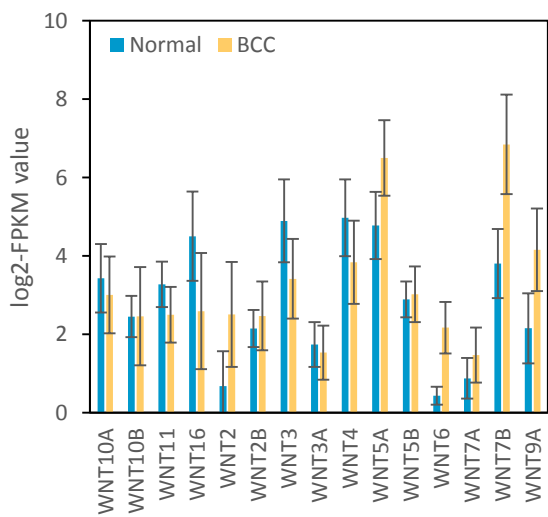


# Supplementary Figure 7. Continued

d



e





## Supplementary Figure 8. SCC up regulated binding motifs compared to directly to BCC samples: (a) Haystack top 5 motifs and (b) Homer top 10 motifs

### a. Haystack

Motif ID	Motif Name	Presence in Target	Presence in BG	Ratio	p-value	q-value	Central Enrichment	Motif Profile	Logo
MA0112.3	ESR1	80.77%	40.38%	1.98	8.05e-04	1.83e-01	1.51		
MA0694.1	ZBTB7B	88.46%	55.77%	1.58	4.69e-03	2.67e-01	1.21		
MA0695.1	ZBTB7C	92.31%	63.46%	1.45	6.87e-03	3.13e-01	1.46		
MA0003.3	TFAP2A	100.00%	75.00%	1.33	3.46e-03	2.63e-01	2.24		
MA0814.1	TFAP2C(var.2)	100.00%	75.00%	1.33	3.46e-03	2.63e-01	2.04		

### b. HOMER

Rank	Motif	P-value	log P-value	% of Targets	% of Background	STD(Bg STD)	Best Match/Details
1 *		1e-8	-2.009e+01	15.69%	0.67%	76.1bp (63.2bp)	HMBOX1/MA0895.1/Jaspar(0.744) <a href="#">More Information</a>   <a href="#">Similar Motifs Found</a>
2 *		1e-8	-1.968e+01	13.73%	0.43%	46.2bp (65.8bp)	ZNF416(Zf)/HEK293-ZNF416.GFP-ChIP-Seq(GSE58341)/Homer(0.572) <a href="#">More Information</a>   <a href="#">Similar Motifs Found</a>
3 *		1e-6	-1.476e+01	27.45%	5.45%	54.0bp (71.8bp)	POU5F1/MA1115.1/Jaspar(0.709) <a href="#">More Information</a>   <a href="#">Similar Motifs Found</a>
4 *		1e-5	-1.346e+01	13.73%	1.10%	56.2bp (63.8bp)	PB0138.1_Irf4_2/Jaspar(0.660) <a href="#">More Information</a>   <a href="#">Similar Motifs Found</a>
5 *		1e-5	-1.287e+01	25.49%	5.46%	57.9bp (63.2bp)	Gata1/MA0035.3/Jaspar(0.688) <a href="#">More Information</a>   <a href="#">Similar Motifs Found</a>
6 *		1e-5	-1.241e+01	9.80%	0.46%	51.1bp (56.9bp)	Atf3/MA0605.1/Jaspar(0.650) <a href="#">More Information</a>   <a href="#">Similar Motifs Found</a>
7 *		1e-3	-7.825e+00	11.76%	1.90%	32.9bp (61.2bp)	PB0121.1_Foxj3_2/Jaspar(0.674) <a href="#">More Information</a>   <a href="#">Similar Motifs Found</a>
8 *		1e-2	-6.860e+00	1.96%	0.00%	0.0bp (14.3bp)	PB0152.1_Nkx3-1_2/Jaspar(0.733) <a href="#">More Information</a>   <a href="#">Similar Motifs Found</a>
9 *		1e-2	-6.860e+00	1.96%	0.00%	0.0bp (14.9bp)	REL/MA0101.1/Jaspar(0.651) <a href="#">More Information</a>   <a href="#">Similar Motifs Found</a>
10 *		1e-2	-6.860e+00	1.96%	0.00%	0.0bp (5.4bp)	NFkB-p65-Rel(RHD)/ThioMac-LPS-Expression(GSE23622)/Homer(0.674) <a href="#">More Information</a>   <a href="#">Similar Motifs Found</a>
11 *		1e-2	-6.792e+00	21.57%	7.44%	51.8bp (61.6bp)	PB0187.1_Tcf7_2/Jaspar(0.637) <a href="#">More Information</a>   <a href="#">Similar Motifs Found</a>

# Supplementary Figure 9. HOMER TF motif enrichment results for down-regulated H3K27ac peaks in (a) SCC samples and (b) BCC samples.

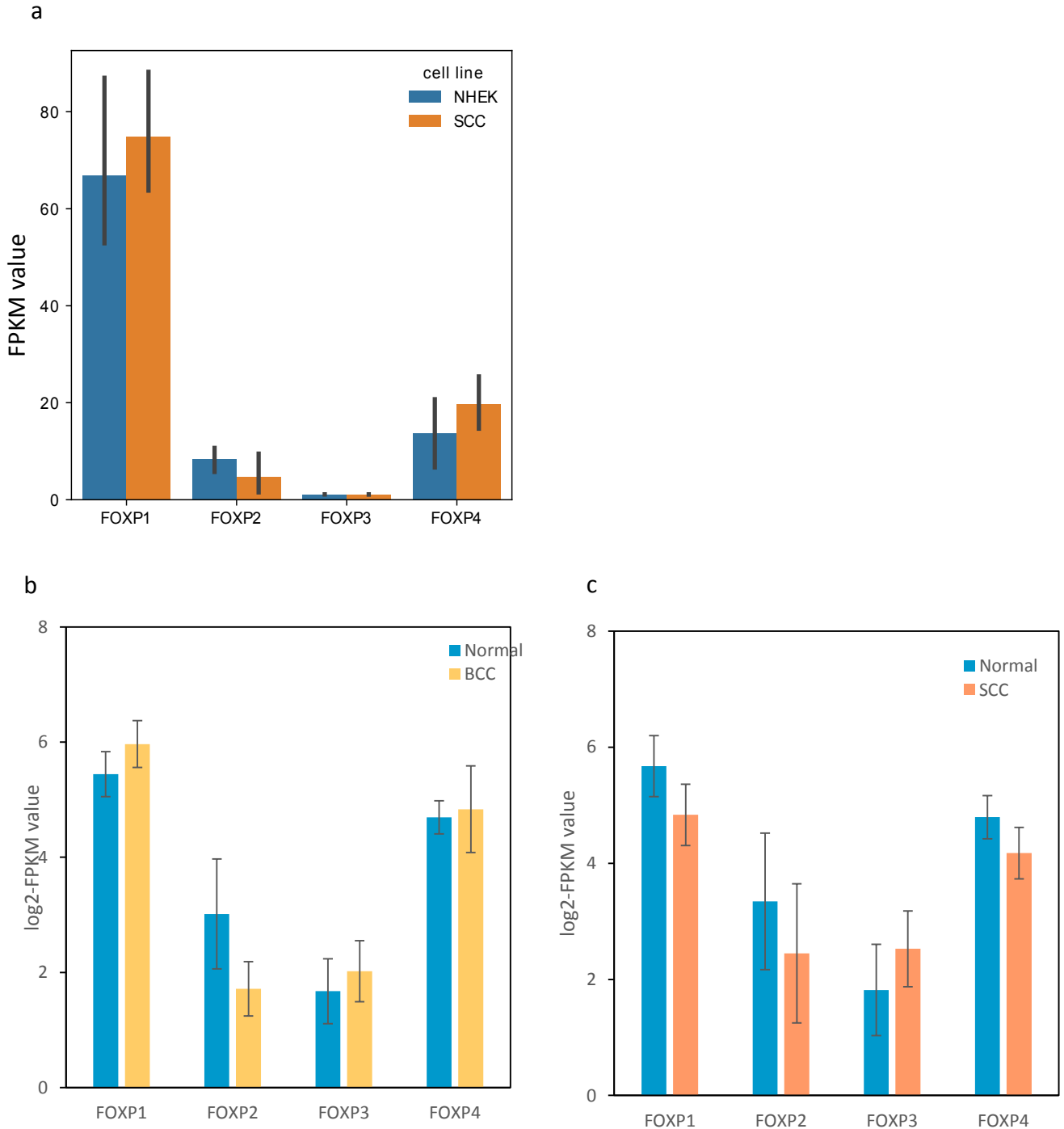
a

Rank	Motif	Name	P-value	log P-value	q-value (Benjamini)	# Target Sequences with Motif	% of Targets Sequences with Motif	# Background Sequences with Motif	% of Background Sequences with Motif
1		NF1-halfsite(CTF)/LNCaP-NF1-ChIP-Seq(Unpublished)/Homer	1e-3	-8.707e+00	0.0708	214.0	23.29%	9062.0	18.51%
2		RORg(NR)/Liver-Rorc-ChIP-Seq(GSE101115)/Homer	1e-3	-8.592e+00	0.0708	11.0	1.20%	152.1	0.31%
3		Mef2a(MADS)/HL1-Mef2a.biotin-ChIP-Seq(GSE21529)/Homer	1e-3	-7.467e+00	0.0815	24.0	2.61%	599.4	1.22%
4		Foxf1(Forkhead)/Lung-Foxf1-ChIP-Seq(GSE77951)/Homer	1e-3	-6.915e+00	0.1063	37.0	4.03%	1128.6	2.30%
5		Smad3(MAD)/NPC-Smad3-ChIP-Seq(GSE36673)/Homer	1e-2	-6.759e+00	0.1063	272.0	29.60%	12298.0	25.11%
6		FOXK1(Forkhead)/HEK293-FOXK1-ChIP-Seq(GSE51673)/Homer	1e-2	-6.677e+00	0.1063	48.0	5.22%	1600.4	3.27%
7		RORa(NR)/Liver-Rora-ChIP-Seq(GSE101115)/Homer	1e-2	-6.613e+00	0.1063	14.0	1.52%	287.7	0.59%
8		Erra(NR)/HepG2-Erra-ChIP-Seq(GSE31477)/Homer	1e-2	-6.582e+00	0.1063	254.0	27.64%	11427.3	23.34%
9		ERRg(NR)/Kidney-ESRRG-ChIP-Seq(GSE104905)/Homer	1e-2	-6.572e+00	0.1063	86.0	9.36%	3289.5	6.72%
10		THRb(NR)/HepG2-THRb.Flag-ChIP-Seq(Encode)/Homer	1e-2	-6.501e+00	0.1063	104.0	11.32%	4128.9	8.43%
11		THRb(NR)/Liver-NR1A2-ChIP-Seq(GSE52613)/Homer	1e-2	-6.385e+00	0.1063	378.0	41.13%	17819.0	36.39%
12		Mef2b(MADS)/HEK293-Mef2b.V5-ChIP-Seq(GSE67450)/Homer	1e-2	-6.283e+00	0.1063	38.0	4.13%	1212.9	2.48%
13		Hoxa13(Homeobox)/ChickenMSG-Hoxa13.Flag-ChIP-Seq(GSE86088)/Homer	1e-2	-5.901e+00	0.1063	107.0	11.64%	4351.5	8.89%
14		RAR:RXR(NR).DR5/ES-RAR-ChIP-Seq(GSE56893)/Homer	1e-2	-5.872e+00	0.1063	9.0	0.98%	153.3	0.31%
15		Zac1(Zf)/Neuro2A-Plagl1-ChIP-Seq(GSE75942)/Homer	1e-2	-5.635e+00	0.1063	443.0	48.20%	21416.0	43.74%

b

Rank	Motif	Name	P-value	log P-value	q-value (Benjamini)	# Target Sequences with Motif	% of Targets Sequences with Motif	# Background Sequences with Motif	% of Background Sequences with Motif
1		THRb(NR)/HepG2-THRb.Flag-ChIP-Seq(Encode)/Homer	1e-4	-9.770e+00	0.0245	24.0	19.05%	3961.4	7.99%
2		Gata6(Zf)/HUG1N-GATA6-ChIP-Seq(GSE51936)/Homer	1e-2	-5.810e+00	0.6412	10.0	7.94%	1388.3	2.80%
3		THRa(NR)/C17.2-THRa-ChIP-Seq(GSE38347)/Homer	1e-2	-5.647e+00	0.6412	13.0	10.32%	2161.6	4.36%

**Supplementary Figure 10.** Gene expression for FOXP genes shows that FOXP1 has higher expression levels (FPKM) than other members in keratinocytes in (a) NHEK and SCC cells, (b) normal and BCC cells, and (c) normal and SCC cells.



**Supplementary Table 1-1. BCC up-regulated H3K27ac peaks and their target genes**

**chrom:** chromosome in hg19

**start:** peak start position in hg19

**end:** peak end position in hg19

**target:** putative target gene(s) from GREAT analysis, gene (distance to the peak)

BCC-upregulated H3K27ac peaks			
Chr	Start	End	Target
chr12	104871481	104873181	CHST11 (+21580), SLC41A2 (+450102)
chr15	22448341	22449034	TUBGCP5 (-384707), OR4N4 (+66306)
chr11	104575424	104576662	PDGFD (-541208), CASP12 (+193117)
chr7	3132233	3132734	SDK1 (-208596), CARD11 (-48905)
chr5	86417337	86417838	RASA1 (-146117), COX7C (+503815)
chr2	197127182	197127994	STK17B (-91289), HECW2 (+329747)
chr22	19878420	19880541	COMT (-49649), GNB1L (-37019)
chr5	39176978	39177706	RICTOR (-102832), FYB (+93417)
chr22	17699725	17700226	CECR5 (-59809), CECR1 (+2903)
chr1	32354799	32355522	SPOCD1 (-73509), PTP4A2 (+48827)
chr9	101819307	101822442	TGFBR1 (-46496), COL15A1 (+114954)
chr5	169723413	169725687	LCP2 (+681)
chr3	55519129	55522574	LRTM1 (-558751), WNT5A (+3121)
chr11	128480585	128481620	FLI1 (-82787), ETS1 (-23666)
chr13	40351299	40351800	COG6 (+121736), FOXO1 (+889184)
chr12	47670022	47671507	AMIGO2 (-197117), RPAP3 (+429079)
chr8	134151205	134152602	SLA (-79301), WISP1 (-51378)
chr7	50307013	50308538	IKZF1 (-40542), C7orf72 (+172144)
chr2	189466055	189466682	COL3A1 (-372677), GULP1 (+308810)
chr17	57841368	57842237	VMP1 (+56977), TUBD1 (+128493)
chr1	234907247	234909773	IRF2BP2 (-163239), TOMM20 (+383741)
chr8	134164132	134165796	SLA (-92361), WISP1 (-38318)
chr9	21558385	21560043	MTAP (-243328), IFNE (-76902)
chr16	87928245	87931608	SLC7A5 (-26833), CA5A (+40195)
chr7	45066503	45068093	CCM2 (+673)
chr19	8634371	8636559	ZNF414 (-56421), MYO1F (+6996)
chr5	34498630	34500034	C1QTNF3 (-455395), RAI14 (-185327)
chr10	81082003	81082910	PPIF (-24777), ZMIZ1 (+253665)
chr6	30476909	30477781	PRR3 (-47318), HLA-E (+20101)
chr6	169434925	169435907	THBS2 (+218723), SMOC2 (+593585)
chr11	89112637	89115967	NOX4 (+110351), TYR (+203682)
chr2	231526038	231526900	CAB39 (-51091), SP100 (+245488)
chr17	57838144	57840866	VMP1 (+54679), TUBD1 (+130791)
chr1	209941066	209943913	TRAF3IP3 (+10647), IRF6 (+36899)
chr5	134769405	134770284	H2AFY (-34533), C5orf20 (+13193)
chr16	81501996	81504508	PLCG2 (-309611), CMIP (+24477)
chr7	17624999	17625500	AHR (+287004), SNX13 (+354867)
chr2	132426825	132427790	GPR39 (-746839), MZT2A (-177313)
chr8	8202300	8205236	ENSG00000182319 (+40240), ZNF705B (+402624)
chr5	1792884	1793557	LPCAT1 (-269129), MRPL36 (+6788)
chr17	30878085	30878782	CDK5R1 (+64797), MYO1D (+325761)
chr19	8641191	8642437	MYO1F (+647)
chr1	90222323	90224442	LRRC8D (-63208), LRRC8C (+124752)
chr17	47294547	47297199	ABI3 (+8284), PHOSPHO1 (+12255)
chr18	10139931	10140675	APCDD1 (-314322), VAPA (+226244)
chr20	42569624	42572221	TOX2 (+27431), JPH2 (+245295)
chr3	152861923	152864061	RAP2B (-17037), P2RY1 (+310256)
chr8	61841481	61842166	CLVS1 (-358690), CHD7 (+250487)

chr14	62127566	62130225	HIF1A (-35444), PRKCH (+340461)
chr13	40350062	40350563	COG6 (+120499), FOXO1 (+890421)
chr1	159795811	159797414	SLAMF8 (+73)
chr18	46358828	46361999	SMAD7 (+116667), CTIF (+294885)
chr20	36451053	36451554	VSTM2L (-80202), CTNBL1 (+128896)
chr12	50055168	50059785	PRPF40B (+40258), FMNL3 (+43720)
chr2	99079762	99082494	INPP4A (+19807), COA5 (+143827)
chr2	192351234	192352778	NABP1 (-191252), MYO1B (+241891)
chr18	10366757	10367258	APCDD1 (-87617), VAPA (+452949)
chr5	33789365	33790031	ADAMTS12 (+102599), TARS (+348627)
chr7	150362735	150363825	GIMAP6 (-33807), GIMAP2 (-19508)
chr2	189678666	189679167	COL3A1 (-160129), GULP1 (+521358)
chr3	188634319	188635529	TPRG1 (-254839), LPP (+704203)
chr1	172606192	172610972	FASLG (-19576), SUCO (+106225)
chr2	113387908	113390104	SLC20A1 (-14428), CHCHD5 (+46988)
chr1	245913747	245915905	KIF26B (+596539), SMYD3 (+755693)
chr1	59395158	59395926	FGGY (-367111), JUN (-145757)
chr7	68741545	68742418	AUTS2 (-322337)
chr18	10304242	10305701	APCDD1 (-149653), VAPA (+390913)
chr1	186157655	186158156	PRG4 (-107505), HMCN1 (+454223)
chr12	67753128	67753629	DYRK2 (-289122), CAND1 (+90318)
chr3	54908909	54910043	LRTM1 (+52625), CACNA2D3 (+752783)
chr1	84609279	84610525	PRKACB (-52)
chr8	49319315	49323469	EFCAB1 (+326399), UBE2V2 (+400432)
chr1	30180789	30184847	PTPRU (+619790)
chr9	75056470	75058230	TMC1 (-79367), ZFAND5 (-77187)
chr6	149357201	149357702	TAB2 (-284736), UST (+288988)
chr4	169552261	169554306	PALLD (+135029), CBR4 (+378125)
chr8	117435915	117436416	TRPS1 (-754938), EIF3H (+331894)
chr12	27332343	27332844	STK38L (-64514), MED21 (+157111)
chr7	92534127	92534628	CDK6 (-71147), SAMD9 (+212958)
chr5	42985030	42985531	SEPP1 (-173100), ZNF131 (-136419)
chr15	82374429	82374930	MEX3B (-36198), EFTUD1 (+180424)
chr8	82411709	82412381	FABP4 (-16547), FABP12 (+31568)
chr7	40337374	40337875	C7orf10 (+163050)
chr1	167586598	167587099	CREG1 (-63845), RCS1 (-12481)
chr14	76298257	76298885	TGFB3 (+148963), TTL5 (+170950)
chr19	6801325	6803162	EMR1 (-85339), VAV1 (+29507)
chr2	85173145	85173915	KCMF1 (-24686), TMSB10 (+40781)
chr13	95920541	95921042	SOX21 (-556403), ABCC4 (+32891)
chr16	31880100	31881588	ZNF267 (-4235)
chr13	21002770	21003271	GJB6 (-196487), CRYL1 (+96975)
chr9	135523378	135523879	GTF3C4 (-21793), BARHL1 (+66057)
chr18	53456541	53458263	TCF4 (-154217), TXNL1 (+848474)
chr20	11125205	11125706	JAG1 (-470762)
chr1	198904810	198906714	PTPRC (+297592)
chr1	160545538	160546039	SLAMF6 (-52746), CD84 (+3505)
chr8	49318285	49323865	EFCAB1 (+326716), UBE2V2 (+400115)
chr21	40138686	40139187	ERG (-105319), ETS2 (-38294)
chr2	102012128	102012863	CREG2 (-8439), RFX8 (+78669)
chr6	45587952	45588453	SUPT3H (-242533), CLIC5 (+459929)
chr19	54875996	54876756	LAIR1 (+188)
chr1	40524764	40526064	CAP1 (+19509), PPT1 (+37961)
chr6	143497136	143497637	AIG1 (+115374), ADAT2 (+274423)
chr11	76411936	76412437	TSKU (-90609), LRRC32 (-31143)
chr18	10376684	10380132	APCDD1 (-76217), VAPA (+464349)

chr19	51625920	51628840	SIGLEC9 (-785)
chr6	29676934	29677435	ZFP57 (-32254), HLA-F (-14000)
chr3	71544868	71545974	FOXP1 (-365433), EIF4E3 (+229105)
chr18	10365011	10365512	APCDD1 (-89363), VAPA (+451203)
chr2	25599916	25600417	DNMT3A (-34708), DTNB (+296336)
chr10	5605358	5608385	CALML3 (+39948), ASB13 (+101669)
chr3	46342823	46343532	CCR2 (-52057), CCR3 (+59306)
chr15	52772711	52777375	MYO5C (-187048), MYO5A (+46204)
chr6	45622844	45625012	SUPT3H (-278258), CLIC5 (+424204)
chr1	30180390	30186380	PTPRU (+620357)
chr11	89112191	89117537	NOX4 (+109789), TYR (+204244)
chr1	111330223	111330724	KCNA3 (-112819), CD53 (-85302)
chr2	74803140	74804946	DOK1 (+22830), M1AP (+71121)
chr7	116923740	116924241	WNT2 (+39352), ST7 (+330610)
chr15	89610675	89611864	MFGE8 (-154628), ABHD2 (-20111)
chr12	67751187	67752167	DYRK2 (-290824), CAND1 (+88616)
chr12	9889519	9890237	CLECL1 (-3983)
chr7	114570181	114572098	MDFIC (+8931)
chr2	74801675	74802176	DOK1 (+20713), M1AP (+73238)
chr18	12047787	12050812	ANKRD62 (-53405), IMPA2 (+67873)
chr13	38019816	38022674	CSNK1A1L (-341442), POSTN (+151736)
chr17	42634181	42634814	FZD2 (-427)
chr9	116430719	116431220	ZNF618 (-207592), RGS3 (+223959)
chr11	106913421	106914104	GUCY1A2 (-24592), CWF19L2 (+414807)
chr13	37743153	37743812	CSNK1A1L (-63680), POSTN (+429498)
chr5	39755442	39756142	PTGER4 (-923808), DAB2 (-330520)
chr10	14049803	14050834	FRMD4A (+322564), PRPF18 (+421392)
chr2	238209083	238210134	COL6A3 (+113409), COPS8 (+215654)
chrX	1619728	1620229	ASMTL (-48213), P2RY8 (+36021)
chr22	27529921	27531264	CRYBA4 (+512665), MN1 (+666893)
chr10	5637496	5638558	ASB13 (+70514), CALML3 (+71103)
chr6	1285806	1287824	EXOC2 (-593704), FOXQ1 (-25860)
chr1	205267211	205268418	NUAK2 (+23068), TMCC2 (+70511)
chr8	144272207	144273414	LY6H (-30683), GPIHBP1 (-22257)
chr10	64396684	64398727	ADO (-166810), ZNF365 (+263755)
chr3	142888556	142891052	CHST2 (+51631), SLC9A9 (+677569)
chr1	160678260	160678920	SLAMF1 (-61505), CD48 (+3051)
chr13	100863151	100863652	PCCA (+122065), GGACT (+372849)
chr21	46298633	46302403	PTTG1IP (-6766), ITGB2 (+48270)
chr7	40259859	40263266	C7orf10 (+86988)
chr10	127837312	127837813	ADAM12 (+239461), FANK1 (+252455)
chr4	86623821	86624322	ARHGAP24 (+227805), MAPK10 (+657144)
chr12	12111144	12111645	BCL2L14 (-112478), ETV6 (+308607)
chr3	101655124	101655973	ZPLD1 (-498310), NFKBIZ (+87191)
chr16	48491610	48493329	SIAH1 (-92658), N4BP1 (+151650)
chr1	79115590	79116240	IFI44 (+399)
chr12	127653587	127654263	NONE
chr11	131934351	131934852	NTM (+153246), OPCML (+878964)
chr1	86620223	86621494	ZNHIT6 (-446758), COL24A1 (+1587)
chr7	17694083	17695883	SNX13 (+285134), AHR (+356737)
chr9	128283378	128285411	MAPKAP1 (+185118), GAPVD1 (+260284)
chr2	65033985	65035232	SLC1A4 (-181926), SERTAD2 (-153562)
chr20	30314941	30315751	BCL2L1 (-4645)
chr1	112048852	112049353	ADORA3 (-2993)
chr4	1194193	1199050	SPON2 (-29961), CTBP1 (+46303)
chr10	63156529	63158398	RHOBTB1 (-453459), TMEM26 (+55744)

chr2	189757170	189759529	COL3A1 (-80696), GULP1 (+600791)
chr4	13892871	13895087	BOD1L1 (-264632)
chr2	238192615	238193116	COL6A3 (+130152), COPS8 (+198911)
chr2	238173454	238174161	COL6A3 (+149210), COPS8 (+179853)
chr13	37767525	37768026	CSNK1A1L (-87973), POSTN (+405205)
chr14	93029280	93030725	RIN3 (+49885), LGMN (+185021)
chr3	99751882	99752759	FILIP1L (+81036), COL8A1 (+395002)
chr5	95481548	95482339	ELL2 (-184169), PCSK1 (+287040)
chr6	37104628	37105945	PIM1 (-32692), COX6A1P2 (+92680)
chr2	200903686	200904187	SPATS2L (-266937), TYW5 (-83478)
chr7	128580333	128581232	IRF5 (+2789), TNPO3 (+114185)
chr17	30895460	30895961	CDK5R1 (+82074), MYO1D (+308484)
chr17	46561500	46562205	SKAP1 (-54301), HOXB1 (+46506)
chr5	111091629	111094516	STARD4 (-244865), NREP (+219555)
chr4	156811047	156811959	ASIC5 (-24078), TDO2 (-13344)
chr21	36724851	36726049	RUNX1 (-303809), SETD4 (+707109)
chr2	178294170	178294671	AGPS (+37049), TTC30B (+123321)
chr5	111283166	111285644	STARD4 (-436197), NREP (+28223)
chr20	1650364	1650865	SIRPA (-225327), SIRPG (-12190)
chr9	15725315	15726023	PSIP1 (-214652)
chr15	39006601	39007234	THBS1 (-866376), RASGRP1 (-149911)
chr1	198466677	198467178	ATP6V1G3 (+43147), NEK7 (+340835)
chr6	1145629	1146306	EXOC2 (-452857), FOXQ1 (-166707)
chr2	28351757	28352258	FOSL2 (-263717), RBKS (-238043)
chr20	58630773	58631450	CDH26 (+97630)
chr1	192513949	192514450	RGS1 (-30657), RGS21 (+228078)
chr7	17701643	17703028	SNX13 (+277781), AHR (+364090)
chr8	82139216	82139717	PAG1 (-115164), FABP5 (-53131)
chr2	12997082	12997717	TRIB2 (+140385)
chr17	37294389	37296512	PLXDC1 (+12451), LASP1 (+269339)
chr12	109299781	109300282	DAO (+26226), SVOP (+72407)
chr1	198898995	198899657	PTPRC (+291156)
chr2	192501703	192503615	NABP1 (-40599), MYO1B (+392544)
chr6	106606937	106607438	PRDM1 (+72993), ATG5 (+166478)
chr15	55545356	55545857	RSL24D1 (-56342), RAB27A (+16985)
chr5	60614726	60616475	SMIM15 (-157300), ZSWIM6 (-12499)
chr2	216525884	216526589	FN1 (-225342), MREG (+352109)
chr5	134772309	134776032	H2AFY (-38859), C5orf20 (+8867)
chr2	232107295	232107796	B3GNT7 (-152708), HTR2B (-117714)
chr4	38372690	38373191	KLF3 (-292876), PTTG2 (+410885)
chr10	4169790	4170291	AKR1E2 (-698405), KLF6 (-342574)
chr9	21575610	21577176	MTAP (-226149), IFNE (-94081)
chr6	149355479	149355980	TAB2 (-286458), UST (+287266)
chr11	13237542	13238746	ARNTL (-61201), TEAD1 (+471556)
chr1	204482545	204483327	MDM4 (-2575)
chr7	142937296	142937943	GSTK1 (-22929), TAS2R40 (+18490)
chr10	5627207	5627834	CALML3 (+60597), ASB13 (+81020)
chr4	146199782	146200964	SMAD1 (-203590), OTUD4 (-99541)
chr2	12842544	12843494	TRIB2 (-13996)
chr14	81236183	81236874	DIO2 (-558686), CEP128 (+171600)
chr7	90676366	90677411	FZD1 (-216894), CDK14 (+338177)
chr7	17718050	17721657	SNX13 (+260263), AHR (+381608)
chr1	116323294	116326069	CASQ2 (-13280), NHLH2 (+61856)
chr7	89807911	89808412	STEAP2 (-32838), STEAP1 (+24473)
chr5	111016712	111018570	STARD4 (-169433), NREP (+294987)
chr11	128778509	128779505	C11orf45 (-3415)

chr2	225276365	225278672	FAM124B (-10768), CUL3 (+172546)
chr2	33754835	33755499	RASGRP3 (+53872)
chr18	53790857	53792465	TCF4 (-488476), TXNL1 (+514215)
chr19	42615800	42616301	POU2F2 (+20528), ZNF574 (+41533)
chr9	98823828	98824329	ERCC6L2 (+186096), HSD17B3 (+240355)
chr5	95484831	95486878	ELL2 (-188080), PCSK1 (+283129)
chr21	47971450	47972810	S100B (+52991), DIP2A (+93106)
chr8	8153373	8154217	ENSG00000182319 (+90213), ZNF705B (+352651)
chr4	13908729	13909809	BOD1L1 (-279922)
chr6	106034799	106035300	PRDM1 (-499145), PREP (-184091)
chr16	88335245	88340362	ZNF469 (-156075), BANP (+334180)
chr17	29279393	29280168	RNF135 (-17438), ADAP2 (+31083)
chr9	91769683	91770184	SHC3 (+23748), S1PR3 (+158513)
chr18	10239475	10240655	APCDD1 (-214560), VAPA (+326006)
chr9	115624543	115625638	SLC46A2 (+28102), SNX30 (+111973)
chr2	172101553	172102054	TLK1 (-84461), METTL8 (+188792)
chr13	37881128	37881756	CSNK1A1L (-201639), POSTN (+291539)
chr14	75083007	75088249	LTBP2 (-6594), AREL1 (+94190)
chr9	129921306	129923613	GARNL3 (-104345), ANGPTL2 (-37298)
chr4	13919091	13919726	BOD1L1 (-290062)
chr15	38342400	38343413	SPRED1 (-201620), TMC05A (+115449)
chr13	38063423	38066451	CSNK1A1L (-385134), POSTN (+108044)
chr15	65701259	65701896	IGDCC3 (-31200), IGDCC4 (+13832)
chr10	75654013	75654514	CAMK2G (-19921), PLAU (-16651)
chr15	102155728	102156229	PCSK6 (-126106), TM2D3 (+36591)
chr13	46745898	46746864	CPB2 (-67220), LCP1 (+39102)
chr2	175700774	175702491	CHRNA1 (-72444), CHN1 (+168321)
chr3	55511144	55526179	LRTM1 (-556561), WNT5A (+5311)
chr12	96438615	96439116	ELK3 (-149294), LTA4H (-9427)
chr10	14048872	14052755	FRMD4A (+322069), PRPF18 (+421887)
chr3	55515028	55516034	LRTM1 (-553430), WNT5A (+8442)
chr5	150169522	150170807	IRGM (-55920), SMIM3 (+12657)
chr1	235153771	235155299	IRF2BP2 (-409264), TOMM20 (+137716)
chr1	198745731	198746232	PTPRC (+137812)
chr14	23639983	23641128	CEBPE (-51731), SLC7A8 (+12293)
chr3	160121804	160122305	IFT80 (-4735)
chr2	192500312	192500938	NABP1 (-42633), MYO1B (+390510)
chr12	118745016	118746246	TAOK3 (+65119), PEBP1 (+171968)
chr17	57826541	57853759	VMP1 (+55324), TUBD1 (+130146)
chr18	43381110	43384367	SIGLEC15 (-22738), SLC14A1 (+76049)
chr2	216564861	216565715	FN1 (-264393), MREG (+313058)
chr10	21687711	21688212	NEBL (-501431), SKIDA1 (+126649)
chr9	137394354	137395068	COL5A1 (-138909), RXRA (+176285)
chr2	132425601	132428239	GPR39 (-747227), MZT2A (-176925)
chr8	104357388	104358324	CTHRC1 (-25887), FZD6 (+46797)
chr10	5604965	5609495	CALML3 (+40306), ASB13 (+101311)
chr6	106040422	106040923	PRDM1 (-493522), PREP (-189714)
chr10	14051439	14052496	FRMD4A (+320915), PRPF18 (+423041)
chr5	76151662	76152465	CRHBP (-96474), S100Z (+6140)
chr6	44634461	44635826	RUNX2 (-660962), CDC5L (+279882)
chr18	46364921	46366009	SMAD7 (+111616), CTIF (+299936)
chr1	30852042	30852817	MATN1 (+344004)
chr5	134582005	134582689	PITX1 (-212359), H2AFY (+152965)
chr15	81384732	81385233	IL16 (-132758), MESDC2 (-102764)
chr1	153358436	153359094	S100A12 (-10640), S100A8 (+4899)
chr9	118358039	118359800	PAPPA (-557163), DEC1 (+454823)



chr17	46078154	46081443	CDK5RAP3 (+31392), COPZ2 (+35340)
chr18	46578917	46579418	SMAD7 (-102087), DYM (+408004)
chr5	34051437	34055140	RAI14 (-631370), C1QTNF3 (-9352)
chr5	100113371	100114057	ST8SIA4 (+125256), FAM174A (+242705)
chr8	49331155	49332879	EFCAB1 (+315774), UBE2V2 (+411057)
chr14	69224160	69225423	ZFP36L1 (+35165), RAD51B (+938267)
chr20	46419238	46421794	SULF2 (-5186)
chr20	5634087	5635336	CHGB (-257364), GPCPD1 (-43040)
chr12	105710670	105711444	APPL2 (-81196), NUAK1 (+822754)
chr6	80934066	80934918	BCKDHB (+118128)
chr7	101360492	101362359	CUX1 (-97865), MYL10 (-88850)
chr9	93732151	93732652	SYK (+168333), AUH (+391793)
chr3	11571027	11572511	VGLL4 (+113629), ATG7 (+257667)
chr6	22025533	22027727	PRL (+271100), SOX4 (+432658)
chr5	135348090	135348752	LECT2 (-57698), TGFBI (-16163)
chr13	50969677	50970178	RNASEH2B (-513886), DLEU1 (+313621)
chr18	10056827	10061882	APCDD1 (-395270), VAPA (+145296)
chr1	198462213	198462714	ATP6V1G3 (+47611), NEK7 (+336371)
chr10	98500791	98501585	LCOR (-91549), PIK3AP1 (-20917)
chr5	167836169	167837126	RARS (-76802), WWC1 (+117493)
chr6	45644871	45645652	SUPT3H (-299592), CLIC5 (+402870)
chr10	72432415	72432916	ADAMTS14 (+107)
chr21	37801538	37803597	CHAF1B (+44892), CLDN14 (+49820)
chr4	54553455	54554570	LNX1 (-96230), CHIC2 (+376844)
chr2	206564271	206565869	NRP2 (+17846), INO80D (+385836)
chr2	163097412	163102671	FAP (+3)
chr11	59952986	59953680	MS4A6A (-2637)
chr20	25298093	25299140	PYGB (+69912), ABHD12 (+73002)
chr3	153331423	153333074	ARHGEF26 (-506543), RAP2B (+452220)
chr8	133957426	133959646	TG (+79330), SLA (+114067)
chr15	71920197	71923963	SENP8 (-487112), THSD4 (+532789)
chr6	114134761	114135262	MARCKS (-43529)
chr20	46558362	46559255	SULF2 (-143479), PREX1 (+885611)
chr18	56517151	56517652	ZNF532 (-12430), MALT1 (+178784)
chr3	54988354	54989120	LRTM1 (-26636), WNT5A (+535236)
chr11	10612770	10615412	LYVE1 (-23853), MRVI1 (+101208)
chr9	117314383	117314884	DFNB31 (-47384), ATP6V1G1 (-35392)
chr8	11731589	11736136	CTSB (-8125), DEFB136 (+98245)
chr20	46555639	46556140	SULF2 (-140560), PREX1 (+888530)
chr12	116818861	116821143	MAP1LC3B2 (-177184), MED13L (-104859)
chr12	22840130	22840758	ETNK1 (+62435)
chr2	163112487	163112988	FAP (-12693), IFIH1 (+62475)
chr8	104383245	104385536	CTHRC1 (+648)
chr2	189489146	189489973	COL3A1 (-349486), GULP1 (+332001)
chr5	95555631	95556132	ELL2 (-258107), PCSK1 (+213102)
chr6	6362959	6363460	LY86 (-225131), F13A1 (-42143)
chr5	33650474	33651109	TARS (+209721), ADAMTS12 (+241505)
chr8	105373054	105374451	DCSTAMP (+21699), DPYS (+105528)
chr6	21954299	21954981	PRL (+343090), SOX4 (+360668)
chr10	73132203	73132704	SLC29A3 (+53439), C10orf105 (+347124)
chr14	20895956	20896913	TEP1 (-14855), OSGEP (+26829)
chr6	166672040	166672541	T (-90184), SFT2D1 (+83788)
chr2	158102463	158104137	GALNT5 (-10810), GPD2 (+811347)
chr19	17633631	17634882	FAM129C (+147)
chr1	120229591	120230092	ZNF697 (-39446), PHGDH (-24668)
chr2	28310132	28310633	FOSL2 (-305342), RBKS (-196418)

chr1	116322923	116326671	CASQ2 (-13395), NHLH2 (+61741)
chr1	76719409	76719910	ST6GALNAC5 (-613466), ST6GALNAC3 (+179256)
chr17	60972771	60973272	TANC2 (-113895), MARCH10 (-87327)
chr10	31434783	31437061	ZEB1 (-172179), ZNF438 (-115056)
chr8	104359070	104361830	CTHRC1 (-23293), FZD6 (+49391)
chr11	131942315	131942965	NTM (+161284), OPCML (+870926)
chr6	17993088	17993589	KIF13A (-5539), NHLRC1 (+129512)
chr18	10373465	10382570	APCDD1 (-76607), VAPA (+463959)
chr8	70544809	70545310	SULF1 (+166201), SLC05A1 (+202239)
chr20	11188350	11189017	JAG1 (-533990)
chr7	17712942	17714919	SNX13 (+266186), AHR (+375685)
chr12	106051377	106054853	APPL2 (-423254), NUAK1 (+480696)
chr3	184166101	184166602	EPHB3 (-113220), CHR1 (+68491)
chr7	101360168	101362939	CUX1 (-97737), MYL10 (-88978)
chr15	39542764	39544006	RASGRP1 (-686378), THBS1 (-329909)
chr3	146687296	146689220	PLSCR1 (-425607), ZIC4 (+433813)
chr2	238185746	238190225	COL6A3 (+135032), COPS8 (+194031)
chr8	49814862	49817402	EFCAB1 (-168341), SNAI2 (+18167)
chr17	42611306	42611969	GPATCH8 (-30869), FZD2 (-23287)
chr6	52912771	52913981	GSTA4 (-53200), ICK (+13224)
chr1	205270555	205271345	NUAK2 (+19933), TMCC2 (+73646)
chr16	57927204	57928407	KIFC3 (-91306), CNGB1 (+77210)
chr17	42633106	42636593	FZD2 (-75)
chr18	10054660	10063080	APCDD1 (-395755), VAPA (+144811)
chr5	167231309	167231810	WWC1 (-487595), TENM2 (+519756)
chr7	121384728	121385369	FAM3C (-348661), PTPRZ1 (-128094)
chr17	57843480	57846396	VMP1 (+60112), TUBD1 (+125358)
chr5	178803914	178807478	RUFY1 (-171863), ADAMTS2 (-33265)
chr15	59268256	59268757	SLTM (-42655), RNF111 (-11644)
chr8	37350385	37351396	ZNF703 (-202378), KCNU1 (+708999)
chr11	131630527	131631028	SNX19 (-844374), NTM (-150578)
chr9	117038330	117039022	ORM1 (-46660), COL27A1 (+120836)
chr2	177284106	177284607	HNRNPA3 (-792934), MTX2 (+150210)
chr17	29281410	29282254	RNF135 (-15387), ADAP2 (+33134)
chr13	37737090	37737591	CSNK1A1L (-57538), POSTN (+435640)
chr1	172352055	172352739	PIGC (+60829), DNM3 (+541776)
chr9	92445425	92446207	GADD45G (+225888), DIRAS2 (+959570)
chr13	98039445	98040097	RAP2A (-46705), MBNL2 (+165162)
chr13	42187143	42190291	RGCC (+157022), VWAS (+346503)
chr12	91643816	91646331	DCN (-68174), BTG1 (+894599)
chr8	103379685	103381394	RRM2B (-129194), UBR5 (+44529)
chr3	152338571	152339072	TMEM14E (-280043), P2RY1 (-213914)
chr11	71655546	71656513	IL18BP (-54079), RNF121 (+16283)
chr17	20110363	20110864	SPECC1 (+120279), LGALS9B (+260234)
chr16	73186939	73187626	ZFX3 (-105009)
chrX	133683067	133685735	HPRT1 (+90218), PLAC1 (+108112)
chr1	17515857	17517367	PADI2 (-70682), PADI1 (-15009)
chr7	141372653	141375365	WEE2 (-34144), AGK (+123020)
chr1	198743665	198748236	PTPRC (+137781)
chr7	101765611	101766112	SH2B2 (-162543), CUX1 (+306571)
chr5	134725167	134729798	PITX1 (-357495), H2AFY (+7829)
chr1	153362961	153363462	S100A8 (+452)
chr3	154796464	154798329	MME (-39)
chr2	239432174	239432675	TWIST2 (-324248), ASB1 (+96960)
chr2	235149888	235150660	SPP2 (+190931), ARL4C (+255423)
chr12	52213711	52214702	ANKRD33 (-67537), SCN8A (+229187)

chr18	10238320	10241369	APCDD1 (-214780), VAPA (+325786)
chr5	178803841	178805854	RUFY1 (-172711), ADAMTS2 (-32417)
chr4	77674420	77676497	SEPT11 (-195397), SHROOM3 (+319206)
chr5	39525932	39528122	DAB2 (-101755)
chr14	56800026	56801184	TMEM260 (-245906), PELI2 (+215512)
chr8	23033825	23035586	TNFRSF10D (-13163), TNFRSF10A (+47933)
chr3	46132438	46132939	XCR1 (-63455), CCR1 (+117198)
chr15	38335209	38335857	SPRED1 (-208994), TMC05A (+108075)
chr18	10039980	10040990	APCDD1 (-414140), VAPA (+126426)
chr2	187213507	187214176	ZC3H15 (-137041), FSIP2 (+610487)
chr11	128774568	128776188	C11orf45 (+214)
chr6	22827631	22829470	PRL (-530821)
chr17	8826124	8826625	PIK3R6 (-55381), PIK3R5 (+42649)
chr11	106268993	106269849	AASDHPPT (+321205), GUCY1A2 (+619750)
chr2	238005870	238006502	COPS8 (+12231), COL6A3 (+316832)
chr11	131941297	131941798	NTM (+160192), OPCML (+872018)
chr9	20319297	20319798	SLC24A2 (-532622), MLLT3 (+302994)
chr6	22364260	22364761	PRL (-66781)
chr18	56451600	56453759	ZNF532 (-77152), MALT1 (+114062)
chr2	225746389	225747066	CUL3 (-296663), DOCK10 (+160431)
chr12	106050759	106055392	APPL2 (-423215), NUAK1 (+480735)
chr1	15585845	15586476	EFHD2 (-150230), TMEM51 (+107133)
chr2	221988780	221989409	EPHA4 (+447915)
chr14	93252289	93252790	LGMM (-37516), GOLGA5 (-8036)
chr15	33131115	33131616	GREM1 (+121191), FMN1 (+228719)
chr6	170714733	170715415	FAM120B (+99230), PSMB1 (+147355)
chr7	40854630	40855131	C7orf10 (+680306), INHBA (+887825)
chr17	60690891	60691392	MRC2 (-13620), TLK2 (+134756)
chr14	99500937	99503750	BCL11B (+235221)
chr10	77371476	77371977	ZNF503 (-210063), C10orf11 (-170792)
chr17	48254028	48257361	SGCA (+12329), COL1A1 (+23298)
chr6	22366880	22367513	PRL (-69467)
chr16	22703006	22707618	HS3ST2 (-120186), NPIP5 (+180468)
chr13	24079205	24079706	TNFRSF19 (-74043), SACS (-71615)
chr2	238121651	238123742	COPS8 (+128742), COL6A3 (+200321)
chr13	50202629	50203130	ARL11 (+445)
chr2	238107285	238112579	COPS8 (+115977), COL6A3 (+213086)
chr17	53511169	53511670	MMD (-12067), TMEM100 (+298062)
chr10	61321536	61322037	SLC16A9 (+148050), PHYHIPL (+385437)
chr2	131669132	131670244	ARHGEF4 (-4536)
chr12	6250856	6251507	CD9 (-57699), VWF (-17341)
chr12	7651931	7652704	CD163L1 (-55537), CD163 (+4171)
chr17	46623874	46626298	HOXB2 (-1645)
chr11	86226317	86227839	ME3 (+156600), C11orf73 (+213813)
chr15	58809495	58810227	LIPC (+107093), ADAM10 (+232316)
chr3	101848561	101850015	ZPLD1 (-304571), NFKBIZ (+280930)
chr2	158101284	158104499	GALNT5 (-11218), GPD2 (+810939)
chr12	7708836	7709337	CD163 (-52598), APOBEC1 (+109402)
chr20	55606310	55606811	BMP7 (+235123), TFAP2C (+402203)
chr5	92544633	92545559	NR2F1 (-373947)
chr10	77228405	77229677	C10orf11 (-313478), ZNF503 (-67377)
chr18	20882643	20884044	TMEM241 (+134525), CABLES1 (+167617)
chr17	10459523	10460316	MYH2 (-6646), MYH3 (+100706)
chr6	166671273	166674468	T (-90764), SFT2D1 (+83208)
chr2	192301384	192302486	NABP1 (-241323), MYO1B (+191820)
chr17	57868993	57870799	VMP1 (+85070), TUBD1 (+100400)

chr8	86847643	86848144	REXO1L10P (-89149), PSKH2 (+234032)
chr2	238190976	238191775	COL6A3 (+131642), COPS8 (+197421)
chr1	178029353	178030212	SEC16B (-90733), RASAL2 (-33493)
chr1	175097617	175101372	TNN (+62501), TNR (+613411)
chr1	213500387	213501393	PROX1 (-660396), RPS6KC1 (+276293)
chr4	160100485	160101376	RAPGEF2 (-87958), FNIP2 (+410641)
chr18	10518164	10520329	NAPG (-6784), APCDD1 (+64622)
chr12	58813321	58813953	XRCC6BP1 (+478277), LRIG3 (+500666)
chr1	222216726	222217227	DUSP10 (-301459), HHIPL2 (+504468)
chr4	90390958	90391459	TIGD2 (+357241), SNCA (+367081)
chr17	59363638	59364268	TBX2 (-113304), BCAS3 (+608703)
chr12	66334825	66335326	HMGA2 (+117165), ENSG00000228144 (+228689)
chr7	81475204	81475705	HGF (-75941), CACNA2D1 (+597659)
chr11	59950011	59950659	MS4A6A (+361)
chr18	42914965	42915466	SLC14A2 (-279550), SETBP1 (+654353)
chr15	51494500	51496031	CYP19A1 (+135541), AP4E1 (+294396)
chr18	10111655	10112156	APCDD1 (-342719), VAPA (+197847)
chr15	39524085	39525187	RASGRP1 (-667629), THBS1 (-348658)
chr19	46701926	46703020	IGFL1 (-30536), IGFL2 (+51434)
chr18	10284719	10287742	APCDD1 (-168394), VAPA (+372172)
chr3	121713967	121714815	ILDR1 (+26660), SLC15A2 (+101455)
chr5	167246314	167249461	WWC1 (-471267), TENM2 (+536084)
chr2	219196712	219198018	SLC11A1 (-49387), TM6IM1 (-45793)
chr17	42664338	42664839	DBF4B (-121462), FZD2 (+29664)
chr12	66218164	66219928	HMGA2 (+1135), ENSG00000228144 (+344719)
chr6	112305415	112308866	FYN (-112486), WISP3 (-68321)
chr7	26140487	26141831	NPVF (-873054), NFE2L3 (-50701)
chr5	36657337	36659050	NIPBL (-218667), SLC1A3 (+51737)
chr10	63511205	63511875	TMEM26 (-298332), ARID5B (-149519)
chr6	136356164	136359921	PDE7B (+185209), MTFR2 (+213406)
chr3	30619390	30619891	TGFBR2 (-28452)
chr12	71975436	71975937	TSPAN8 (-140009), THAP2 (-81102)
chr5	142440820	142441877	ARHGAP26 (+291400), NR3C1 (+341905)
chr16	3136629	3138644	ZSCAN10 (+5224), IL32 (+22252)
chr9	92480144	92480645	GADD45G (+260467), DIRAS2 (+924991)
chr13	20933870	20934598	GJB6 (-127700), CRYL1 (+165762)
chr9	75094211	75094712	ZFAND5 (-114299), TMC1 (-42255)
chr8	145992315	145994292	ZNF251 (-12314), ZNF34 (+19385)
chr3	64328654	64331836	PRICKLE2 (-119114), ADAMTS9 (+343431)
chrX	133682010	133686284	HPRT1 (+89964), PLAC1 (+108366)
chr1	112972762	112973833	WNT2B (-78102), CTTNBP2NL (+34495)
chr10	85930963	85931656	C10orf99 (-2184)
chr17	29282863	29284574	RNF135 (-13500), ADAP2 (+35021)
chr6	12585457	12586436	PHACTR1 (-132595), EDN1 (+295351)
chr1	9503831	9504462	SLC25A33 (-95394), SPSB1 (+151208)
chr1	60208064	60211162	HOOK1 (-70920), FGGY (+446960)
chr6	17992814	17994895	KIF13A (-6055), NHLRC1 (+128996)
chr12	105955550	105956051	APPL2 (-325940), NUAK1 (+578010)
chr20	46557114	46557806	SULF2 (-142130), PREX1 (+886960)
chr7	25010336	25012284	DFNA5 (-213578), OSBPL3 (+8497)
chr7	16955728	16956229	AHR (-382267), AGR3 (-34368)
chr19	51644984	51645485	SIGLEC7 (-323)
chr12	106387484	106387985	APPL2 (-757874), NUAK1 (+146076)
chr1	154883675	154884176	KCNN3 (-41170), PMVK (+25541)
chr2	208656841	208657672	FZD5 (-22970), PLEKHM3 (+233027)
chr11	36171511	36172012	PRR5L (-225793), LDLRAD3 (+206134)

chr6	119089338	119089839	ASF1A (-125795), CEP85L (-58351)
chr3	101875467	101875968	ZPLD1 (-278141), NFKBIZ (+307360)
chr14	76076973	76077474	FLVCR2 (+32264), C14orf1 (+50308)
chr6	136316087	136316738	PDE7B (+143579), MTFR2 (+255036)
chr12	66216786	66221574	HMGA2 (+1269), ENSG00000228144 (+344585)
chr5	17105520	17106021	MYO10 (-169399), BASP1 (-111898)
chr7	107639193	107639694	LAMB1 (+4256), DLD (+108029)
chr15	22486693	22492501	TUBGCP5 (-343798), OR4N4 (+107215)
chr10	123092432	123092933	FGFR2 (+265234), WDR11 (+481996)
chr5	53685279	53685780	ARL15 (-79127), HSPB3 (-65915)
chr3	77873944	77874445	NONE
chr13	20998258	21000635	GJB6 (-192913), CRYL1 (+100549)
chr1	213498316	213502375	PROX1 (-660940), RPS6KC1 (+275749)
chr7	101585615	101586116	SH2B2 (-342539), CUX1 (+126575)
chr13	24313311	24313812	MIPEP (+149996), TNFRSF19 (+160063)
chr20	46537883	46538726	SULF2 (-122975), PREX1 (+906115)
chr11	95328932	95329433	SESN3 (-364822), FAM76B (+193772)
chr7	119057	120063	FAM20C (-73409)
chr7	118259	120488	FAM20C (-73595)
chr17	28994557	28995198	TBC1D29 (+110748), CRLF3 (+156916)
chr12	125353132	125353859	SCARB1 (-5103), UBC (+46398)
chr5	2685961	2686462	IRX4 (-798880), IRX2 (+65564)
chr20	55575121	55575622	BMP7 (+266312), TFAP2C (+371014)
chr13	24146375	24146876	SACS (-138785), TNFRSF19 (-6873)
chr1	60217881	60218838	HOOK1 (-62173), FGGY (+455707)
chr12	106313473	106313974	APPL2 (-683863), NUAK1 (+220087)
chr7	27032577	27033248	SKAP2 (-128551), HOXA1 (+102680)
chr11	56980861	56982154	APLNR (+23167), LRRCS5 (+32287)
chr4	38083751	38084419	KLF3 (-581732), PTTG2 (+122029)
chr6	136333212	136333713	PDE7B (+160629), MTFR2 (+237986)
chr9	132107877	132108378	NTMT1 (-263035), PPP2R4 (+234531)
chr18	13499941	13503050	FAM210A (+225063), LDLRAD4 (+282710)
chr1	181069125	181071205	CACNA1E (-382716), MR1 (+67026)
chr12	27695548	27696049	REP15 (-153629), PPFIBP1 (+18660)
chr3	64325254	64333181	PRICKLE2 (-118087), ADAMTS9 (+344458)
chr9	116360783	116361284	ZNF618 (-277528), RGS3 (+154023)
chr3	10973967	10979867	SLC6A1 (-57493), SLC6A11 (+119032)
chr6	7331459	7333595	RIOK1 (-57202), SSR1 (-19087)
chr12	6254519	6255150	CD9 (-54046), VWF (-20994)
chr4	169724428	169724929	CBR4 (+206730), PALLD (+306424)
chr18	13499353	13505121	FAM210A (+224322), LDLRAD4 (+283451)
chr12	1921087	1921588	LRTM2 (-8095), ADIPOR2 (+121145)
chr1	213498848	213499482	PROX1 (-662121), RPS6KC1 (+274568)
chr13	20805118	20807228	GJB6 (+361)
chr1	152421125	152421883	LCE5A (-61816), CRNN (-34765)
chr13	42184166	42185884	RGCC (+153330), VWA8 (+350195)
chr3	185435031	185436236	IGF2BP2 (+107210), SENP2 (+131672)
chr2	172959404	172960250	DLX2 (+7801), DLX1 (+9873)
chr3	40086424	40086925	EIF1B (-264500), MYRIP (+235579)
chr12	66025649	66026830	HMGA2 (-191671), MSRB3 (+353817)
chr12	706954	707455	NINJ2 (+65740), B4GALNT3 (+137675)
chr17	48396106	48396878	XYLT2 (-26961), TMEM92 (+47725)
chr5	83677819	83680881	HAPLN1 (-661918), EDIL3 (+1261)
chr4	157695101	157695756	CTSO (-820360), PDGFC (+197117)
chr2	99441203	99441890	MGAT4A (-93958), TSGA10 (+329833)
chr9	16626940	16628949	BNC2 (+242759)

chr6	139899086	139899587	CITED2 (-203580)
chr1	223673370	223673871	SUSD4 (-136220), CAPN8 (+179727)
chr2	16080943	16081444	MYCN (+508)
chr6	12354874	12355375	PHACTR1 (-363417), EDN1 (+64529)
chr17	39551277	39551778	KRT34 (-12873), KRT31 (+2316)
chr1	41949819	41950320	EDN2 (+272)
chr12	59413757	59414857	SLC16A7 (-668811), LRIG3 (-100004)
chr6	21664534	21665035	SOX4 (+70813), PRL (+632945)
chr17	46687509	46691114	HOXB7 (-933)
chr7	430806	432275	PDGFA (+127490), FAM20C (+238572)

**Supplementary Table 1-2. BCC down-regulated H3K27ac peaks and their target genes**

**chrom:** chromosome in hg19

**start:** peak start position in hg19

**end:** peak end position in hg19

**target:** putative target gene(s) from GREAT analysis, gene (distance to the peak)

BCC-downregulated H3K27ac peaks			
Chr	Start	End	Target
chr19	708232	710793	PALM (+412)
chr14	102025515	102026611	DIO3 (-1625)
chr5	146614123	146614782	STK32A (-73)
chr1	61508727	61509483	C1orf87 (-969663), NFIA (-38429)
chr7	1506062	1507057	MICALL2 (-7422), INTS1 (+37443)
chr9	87282833	87287560	NTRK2 (+1731)
chr8	12808716	12810028	KIAA1456 (+6186), DLC1 (+563023)
chr6	157557065	157558357	TMEM242 (+186922), ARID1B (+458648)
chr12	131531476	131533762	SFSWAP (-663063), GPR133 (+94167)
chr11	130747932	130748433	SNX19 (+38221), C11orf44 (+205332)
chr3	173115182	173116085	NLGN1 (-604)
chr2	191044786	191046363	C2orf88 (-14)
chr17	15689240	15690065	ADORA2B (-158578), TBC1D26 (+54062)
chrX	47060199	47060700	INE1 (-3870)
chr16	49872691	49873192	CNEP1R1 (-185379), ZNF423 (-16292)
chr17	41984314	41984815	MPP2 (+548)
chr20	2672779	2673280	EBF4 (-494)
chr21	36041566	36044059	CLIC6 (+1125), RUNX1 (+378828)
chr9	87282403	87288187	NTRK2 (+1829)
chr14	69726401	69729556	GALNT16 (+1298), ERH (+137365)
chr2	211089455	211090133	ACADL (+421)
chr17	15689175	15690371	ADORA2B (-158458), TBC1D26 (+54182)
chr2	96050796	96051423	FAHD2A (-17364), KCNIP3 (+88058)
chr3	126074972	126075985	KLF15 (+806)
chr14	101999292	102002832	DIO3 (-26626), ENSG00000269375 (+641797)
chr5	146613374	146615111	STK32A (-283)
chr11	1580088	1580589	MOB2 (-72363), DUSP8 (+12811)
chr11	63258417	63258918	HRASLS5 (-2)
chr12	131753109	131753610	SFSWAP (-442322), GPR133 (+314908)
chr10	118030073	118033924	GFRA1 (+980)
chr20	43374290	43374931	KCNK15 (+190)
chr8	12808274	12810745	KIAA1456 (+6324), DLC1 (+562885)
chr11	65373899	65374400	KCNK7 (-10683), MAP3K11 (+7563)
chr8	91996841	91998100	TMEM55A (+55821), NECAB1 (+193693)
chr9	34589094	34590706	CNTFR (-165)
chr2	287500	290082	FAM150B (-495)
chr22	46422501	46423961	PPARA (-123268), WNT7B (-50222)
chr2	237562939	237563440	COPS8 (-430765), ACKR3 (+84906)
chr12	54772184	54773868	GPR84 (-14755), ZNF385A (+12056)
chr20	62323261	62324016	TNFRSF6B (-4382)
chr5	1539209	1541447	LPCAT1 (-16236), MRPL36 (+259681)
chr1	162517942	162519332	UAP1 (-12686), UHMK1 (+51004)
chr20	4021682	4022394	SMOX (-107388), RNF24 (-25822)
chr1	11846815	11852883	MTHFR (+13453), AGTRAP (+53637)
chr21	36040841	36044634	CLIC6 (+1050), RUNX1 (+378903)
chr12	52442584	52452944	C12orf44 (-15991), NR4A1 (+31148)
chr19	847632	849064	ELANE (-2666)
chr12	54768810	54771452	GPR84 (-11860), ZNF385A (+14951)

chr16	1428687	1429726	GNPTG (+27283), UNKL (+35485)
chr17	19482632	19483329	ALDH3A2 (-69083), SLC47A1 (+45814)
chr14	104015399	104019617	BAG5 (+11127), TRMT61A (+21987)
chr12	52429240	52431973	C12orf44 (-33148), NR4A1 (+13991)
chr9	129873203	129874722	ANGPTL2 (+11199), RALGPS1 (+196910)
chr12	52455865	52457011	C12orf44 (-7317), NR4A1 (+39822)
chr14	103985731	103989036	CKB (+2064), MARK3 (+135527)
chr3	173112820	173113756	NLGN1 (-2950)
chr12	131529378	131536009	SFSWAP (-662988), GPR133 (+94242)
chr12	52448335	52448836	C12orf44 (-15169), NR4A1 (+31970)
chr15	86315394	86316189	KLHL25 (+22469), AKAP13 (+391832)
chr6	119399234	119400558	FAM184A (+12)
chr5	7802312	7802813	FASTKD3 (+66552), ADCY2 (+406242)
chr12	95942143	95942785	USP44 (+2802), METAP2 (+74737)
chr1	6347807	6349048	GPR153 (-27393), ACOT7 (+97445)
chr6	157555978	157559161	TMEM242 (+187063), ARID1B (+458507)
chr9	99380084	99382622	CDC14B (+759)
chr2	286811	290447	FAM150B (-333)
chr10	733628	735598	DIP2C (+993)
chr1	196577149	196578679	KCNT2 (-415)
chr2	71205525	71206313	TEX261 (+16156), ATP6V1B1 (+42907)
chr6	32013958	32015421	TNXB (-785)
chr19	41192804	41193482	NUMBL (+3413), LTBP4 (+90002)
chr17	11501842	11502343	DNAH9 (+345)
chr10	115406275	115406776	NRAP (+17360), HABP2 (+93741)
chr6	132331969	132332792	CTGF (-59868), MOXD1 (+390303)
chr7	30173828	30177090	ZNRF2 (-148464), PLEKHA8 (+107430)
chr8	101524951	101525687	RNF19A (-209832), ANKRD46 (+46651)
chr4	5206860	5207361	C4orf6 (-319772), STK32B (+153942)
chr7	1505231	1509462	MICALL2 (-8209), INTS1 (+36656)
chr22	48885798	48886299	FAM19A5 (+777)
chr10	118029350	118034722	GFRA1 (+943)
chr14	101997409	102003199	DIO3 (-27384), ENSG00000269375 (+641039)
chr10	92921739	92923944	ANKRD1 (-241809), PCGF5 (-57703)
chr9	71939175	71940311	FAM189A2 (-4498)
chr15	68876944	68877597	CORO2B (+5698), ANP32A (+235963)
chr22	38378955	38380851	SOX10 (+641)
chr11	130479170	130480391	C11orf44 (-63070), ADAMTS15 (+160912)
chr20	48363745	48365168	SLC9A8 (-64793), B4GALT5 (-34042)
chr2	211089156	211090713	ACADL (+280)
chr18	48085850	48086351	MAPK4 (-347)
chr11	43963597	43965719	ACCSL (-104873), ALKBH3 (+62269)
chr6	17280880	17282537	RBM24 (+132)
chr21	38352773	38353439	RIPPLY3 (-25757), HLCS (-14333)
chr1	3418740	3419241	ARHGEF16 (+48001), MEGF6 (+109068)
chr19	15890289	15890790	OR10H5 (-14221), OR10H3 (+38337)
chr14	104189371	104190717	ZFYVE21 (+7977), PPP1R13B (+123883)
chr18	45554194	45555102	SMAD2 (-97136), ZBTB7C (+137289)
chr7	103630282	103630783	RELN (-570)
chr19	32619263	32619902	TSHZ3 (-779130), ZNF507 (-216917)
chr19	16507662	16513215	EPS15L1 (+72384), KLF2 (+74811)
chr2	120063360	120064727	DBI (-60785), STEAP3 (+82637)
chr6	149210545	149211046	TAB2 (-431392), UST (+142332)
chr11	125034838	125035497	PKNOX2 (+566)
chr16	71756732	71758108	PHLPP2 (+1184), MARVELD3 (+97330)
chr9	22447265	22447959	DMRTA1 (+772)



chrX	150863626	150864127	PRRG3 (-2902)
chr19	3535995	3538018	FZR1 (+14019), MFSD12 (+20394)
chr11	130476305	130477000	C11orf44 (-66198), ADAMTS15 (+157784)
chr11	8039715	8041984	TUB (-19330), EIF3F (+49052)
chr16	15489396	15490447	MPV17L (+286), ENSG00000261130 (+311)
chr17	36897960	36899099	PCGF2 (+7540), CISD3 (+12042)
chr9	71939266	71941455	FAM189A2 (-3880)
chr21	45344960	45345461	AGPAT3 (+322)
chr1	6351266	6352674	GPR153 (-30935), ACOT7 (+93903)
chr1	61519137	61520656	C1orf87 (-980455), NFIA (-27637)
chr12	131404347	131406170	GPR133 (-33193), RAN (+48835)
chr22	34535561	34536062	ISX (-926317), LARGE (-219403)
chr19	41105701	41106337	LTBP4 (+2878), NUMBL (+90537)
chr2	237795340	237795841	COPS8 (-198364), ACKR3 (+317307)
chr14	92350380	92352806	TC2N (-17720), FBLN5 (+62574)
chr10	134227374	134227875	INPP5A (-123699), STK32C (-106181)
chr6	35036313	35036814	TCP11 (+72860), ANKS1A (+179522)
chr9	34591215	34591927	CNTFR (-1836)
chr8	101521121	101522614	RNF19A (-206381), ANKRD46 (+50102)
chr6	90142822	90143323	ANKRD6 (-129047), RRAGD (-21084)
chr21	45356335	45357419	TRAPPC10 (-75323), AGPAT3 (+11988)
chr19	32616501	32617149	TSHZ3 (-776372), ZNF507 (-219675)
chr1	6346934	6353066	GPR153 (-28965), ACOT7 (+95873)
chr14	22806466	22807519	DAD1 (+251182), OR4E2 (+673696)
chr9	129860781	129861553	ANGPTL2 (+23995), RALGPS1 (+184114)
chr3	142607249	142608617	PCOLCE2 (+112)
chr3	190580362	190581201	GMNC (-378)
chr14	103668487	103668988	EIF5 (-131601), TNFAIP2 (+78940)
chr11	100997614	100998910	PGR (+2993), TMEM133 (+135451)
chr8	101170220	101170865	SPAG1 (-113)
chr9	34592997	34594364	CNTFR (-3946)
chr6	36888841	36889342	PI16 (-33117), C6orf89 (+35452)
chr19	32620610	32621242	TSHZ3 (-780473), ZNF507 (-215574)
chr2	169048243	169048744	STK39 (+56157), B3GALT1 (+373312)
chr1	88928424	88928925	PKN2 (-221230)

**Supplementary Table 1-3. SCC up-regulated H3K27ac peaks and their target genes**

**chrom:** chromosome in hg19

**start:** peak start position in hg19

**end:** peak end position in hg19

**target:** putative target gene(s) from GREAT analysis, gene (distance to the peak)

SCC-upregulated H3K27ac peaks			
Chr	Start	End	Target
chr12	104871481	104873181	CHST11 (+21580), SLC41A2 (+450102)
chr15	22448341	22449034	TUBGCP5 (-384707), OR4N4 (+66306)
chr11	104575424	104576662	PDGFD (-541208), CASP12 (+193117)
chr7	3132233	3132734	SDK1 (-208596), CARD11 (-48905)
chr20	19537456	19537957	RIN2 (-329458), SLC24A3 (+344417)
chr7	40346540	40347041	C7orf10 (+172216)
chr5	86417337	86417838	RASA1 (-146117), COX7C (+503815)
chr2	197127182	197127994	STK17B (-91289), HECW2 (+329747)
chr22	19878420	19880541	COMT (-49649), GNB1L (-37019)
chr5	39176978	39177706	RICTOR (-102832), FYB (+93417)
chr14	52641095	52645097	NID2 (-107384), PTGDR (-91335)
chr7	134301645	134311920	BPGM (-24800), AKR1B15 (+72895)
chr22	17699725	17700226	CECR5 (-59809), CECR1 (+2903)
chr1	32354799	32355522	SPOCD1 (-73509), PTP4A2 (+48827)
chr5	54390536	54394082	GZMA (-6167), GZMK (+72228)
chr8	121743906	121744568	SNTB1 (+81276), MTBP (+286571)
chr9	101819307	101822442	TGFBR1 (-46496), COL15A1 (+114954)
chr14	106471359	106471994	TMEM121 (+478737)
chr5	169723413	169725687	LCP2 (+681)
chr13	94976055	94976832	DCT (+155492)
chr3	55519129	55522574	LRTM1 (-558751), WNT5A (+3121)
chr11	128480585	128481620	FLI1 (-82787), ETS1 (-23666)
chr14	91694341	91697117	GPR68 (+24540), C14orf159 (+115015)
chr5	54396774	54401600	GZMA (+711)
chr13	40351299	40351800	COG6 (+121736), FOXO1 (+889184)
chr3	16342086	16342587	OXNAD1 (+35631), RFTN1 (+212876)
chr14	22392341	22392842	OR4E2 (+259295), DAD1 (+665583)
chr12	47670022	47671507	AMIGO2 (-197117), RPAP3 (+429079)
chr8	134151205	134152602	SLA (-79301), WISP1 (-51378)
chr14	98167745	98177409	VRK1 (+908936)
chr1	172668704	172669205	FASLG (+40797), TNFSF18 (+351148)
chr14	98654900	98656903	NONE
chr8	37132080	37135061	ZNF703 (-419698), KCNU1 (+491679)
chr7	50307013	50308538	IKZF1 (-40542), C7orf72 (+172144)
chr2	189466055	189466682	COL3A1 (-372677), GULP1 (+308810)
chr17	57841368	57842237	VMP1 (+56977), TUBD1 (+128493)
chr15	38869767	38870268	RASGRP1 (-13011)
chr1	234907247	234909773	IRF2BP2 (-163239), TOMM20 (+383741)
chr7	8216108	8217698	ICA1 (+85008), GLCCI1 (+208478)
chr3	33089191	33090459	TMPPE (+48468), CCR4 (+96759)
chr5	54331679	54334698	GZMA (-65287), GZMK (+13108)
chr8	134164132	134165796	SLA (-92361), WISP1 (-38318)
chr1	86673393	86673894	COL24A1 (-51198), ODF2L (+188301)
chr4	78506658	78510481	CXCL13 (+75663), CNOT6L (+231974)
chr21	34303836	34305592	C21orf62 (-124686), OLIG2 (-93529)
chr9	21558385	21560043	MTAP (-243328), IFNE (-76902)
chr16	87928245	87931608	SLC7A5 (-26833), CA5A (+40195)
chr7	45066503	45068093	CCM2 (+673)

chr14	106966240	106968290	TMEM121 (+974325)
chr12	103834217	103837671	STAB2 (-145107), ASCL1 (+484480)
chr17	46529104	46532858	SKAP1 (-23429), HOXB1 (+77378)
chr19	8634371	8636559	ZNF414 (-56421), MYO1F (+6996)
chr3	101236265	101241264	TRMT10C (-41941), SENP7 (-6737)
chr17	34222314	34229132	CCL5 (-18211), RDM1 (+32054)
chr20	31559015	31561109	SUN5 (+32177), EFCAB8 (+113333)
chr2	429126	431260	FAM150B (-141897), TMEM18 (+247246)
chr5	34498630	34500034	C1QTNF3 (-455395), RAI14 (-185327)
chr10	81082003	81082910	PPIF (-24777), ZMIZ1 (+253665)
chr6	30476909	30477781	PRR3 (-47318), HLA-E (+20101)
chr8	129587976	129589453	TMEM75 (-628124)
chr2	85008136	85011569	TRABD2A (+98516), DNAH6 (+266274)
chr18	22236938	22237595	HRH4 (+196674), ZNF521 (+694849)
chr12	32079971	32083131	BICD1 (-178612), H3F3C (-136376)
chr6	169434925	169435907	THBS2 (+218723), SMOC2 (+593585)
chr3	170968355	170976961	SLC2A2 (-228119), TNIK (+205539)
chr1	117311168	117312092	PTGFRN (-141049), CD2 (+14623)
chr5	49928808	49932021	EMB (-193214), PARP8 (-32357)
chr11	89112637	89115967	NOX4 (+110351), TYR (+203682)
chr6	118877499	118881450	PLN (+10014), CEP85L (+151763)
chr2	231526038	231526900	CAB39 (-51091), SP100 (+245488)
chr17	37492466	37492967	STAC2 (-110592), FBXL20 (+65199)
chr2	158259438	158263971	ERMN (-77480), CYTIP (+38949)
chr17	57838144	57840866	VMP1 (+54679), TUBD1 (+130791)
chr1	209941066	209943913	TRAF3IP3 (+10647), IRF6 (+36899)
chr17	34202088	34208435	CCL5 (+2250), TAF15 (+68803)
chr8	126936883	126937544	TRIB1 (+494651), FAM84B (+633424)
chr10	30667435	30667936	MAP3K8 (-55180), MTPAP (-29438)
chr7	23578423	23580267	CCDC126 (-57653), TRA2A (-7685)
chr5	134769405	134770284	H2AFY (-34533), C5orf20 (+13193)
chr1	168503000	168506905	XCL2 (+8282), TBX19 (+254675)
chr16	81501996	81504508	PLCG2 (-309611), CMIP (+24477)
chr7	17624999	17625500	AHR (+287004), SNX13 (+354867)
chr2	132426825	132427790	GPR39 (-746839), MZT2A (-177313)
chr8	8202300	8205236	ENSG00000182319 (+40240), ZNF705B (+402624)
chr5	1792884	1793557	LPCAT1 (-269129), MRPL36 (+6788)
chr17	30878085	30878782	CDK5R1 (+64797), MYO1D (+325761)
chr19	8641191	8642437	MYO1F (+647)
chr7	7983055	7987003	RPA3 (-226791), GLCC1 (-23396)
chr9	137712411	137713104	FCN2 (-59900), COL5A1 (+179138)
chr6	130179922	130184224	TMEM244 (+619)
chr12	68511732	68512233	IFNG (+41544), DYRK2 (+469482)
chr6	86379004	86379654	SYNCRIP (-26326)
chr3	111029201	111031881	CD96 (-230424), PVRL3 (+239951)
chr2	217213440	217219774	MARCH4 (+20143), XRCC5 (+244420)
chr3	43518801	43519302	ANO10 (+144508), SNRK (+191020)
chr1	90222323	90224442	LRRC8D (-63208), LRRC8C (+124752)
chr3	59436642	59437482	FAM3D (-784487)
chr12	22547298	22553209	ST8SIA1 (-62606), C2CD5 (+147226)
chr20	35669885	35673698	SAMHD1 (-91546), RBL1 (+52606)
chr15	70007043	70007544	RPLP1 (+262171), TLE3 (+383221)
chr1	117309203	117309704	PTGFRN (-143225), CD2 (+12447)
chr1	168389039	168393313	XCL2 (+122059), TBX19 (+140898)
chr20	1634944	1648716	SIRPG (-3405)
chr12	32044158	32044659	BICD1 (-215754), H3F3C (-99234)

chr18	56324336	56326887	ALPK2 (-29423), MALT1 (-13006)
chr19	33284069	33287465	TDRD12 (+74788), SLC7A9 (+74905)
chr7	116645929	116646430	ST7 (+52799), WNT2 (+317163)
chr13	94974776	94982877	DCT (+153109)
chr14	22391009	22394377	OR4E2 (+259396), DAD1 (+665482)
chr14	98067784	98073837	VRK1 (+807170)
chr10	135202578	135203544	MTG1 (-4614), ENSG00000254536 (-1277)
chr16	29039936	29041196	LAT (+44419), NPIP11 (+374784)
chr17	47294547	47297199	ABI3 (+8284), PHOSPHO1 (+12255)
chr8	71435414	71437742	NCOA2 (-120538), TRAM1 (+84026)
chr20	1654472	1656044	SIRPA (-220684), SIRPG (-16833)
chr12	22315923	22318340	CMAS (+118024), ST8SIA1 (+170516)
chr15	75898602	75899324	PTPN9 (-27333), SNUPN (+19066)
chr11	127920191	127926104	ETS1 (+534289)
chr6	137708128	137713512	IFNGR1 (-170234), OLIG3 (+104711)
chr18	10139931	10140675	APCDD1 (-314322), VAPA (+226244)
chr3	27921905	27924415	CMC1 (-359926), EOMES (-159171)
chr18	2601773	2607785	SMCHD1 (-50958), NDC80 (+33269)
chr18	12047213	12053969	ANKRD62 (-52114), IMPA2 (+69164)
chr7	127052965	127056259	ZNF800 (-21867), GCC1 (+171049)
chr20	42569624	42572221	TOX2 (+27431), JPH2 (+245295)
chr3	152861923	152864061	RAP2B (-17037), P2RY1 (+310256)
chr16	72515753	72516254	PMFBP1 (-309850), ZFH3 (+566270)
chr20	56425809	56426447	PMEP1 (-141170), PPP4R1L (+458367)
chr5	49740696	49742706	EMB (-4500)
chr5	95561701	95565394	ELL2 (-265773), PCSK1 (+205436)
chr9	86944948	86945449	SLC28A3 (+10399), RMI1 (+349486)
chr19	35731111	35731986	FAM187B (-11917), LSR (-8074)
chr1	99335832	99338130	ENSG00000117598 (+133468), SNX7 (+209702)
chr14	98633428	98645099	NONE
chr8	61841481	61842166	CLVS1 (-358690), CHD7 (+250487)
chr21	43823991	43824492	UBASH3A (+218)
chr12	67875547	67879817	DYRK2 (-164819), CAND1 (+214621)
chr14	62127566	62130225	HIF1A (-35444), PRKCH (+340461)
chr13	30945731	30946479	KATNAL1 (-64484), HMGB1 (+245629)
chr5	39210452	39210953	RICTOR (-136193), FYB (+60056)
chr8	121758806	121763531	SNTB1 (+64344), MTBP (+303503)
chr7	23579501	23580002	CCDC126 (-57246), TRA2A (-8092)
chr13	40350062	40350563	COG6 (+120499), FOXO1 (+890421)
chr9	131995958	132000794	NTMT1 (-372787), PPP2R4 (+124779)
chr7	114555658	114559052	MDFIC (-4854)
chr14	106558483	106561534	TMEM121 (+567069)
chr1	172343222	172343919	PIGC (+69655), DNM3 (+532950)
chr19	56833015	56833516	ZSCAN5A (+46486), ZSCAN5D (+81493)
chr1	88225227	88225860	PKN2 (-924361), LMO4 (+431393)
chr7	157263491	157265940	DNAJB6 (+135056)
chr1	159795811	159797414	SLAMF8 (+73)
chr6	166823398	166835284	MPC1 (-32855), RPS6KA2 (+446698)
chr17	46514030	46523305	SKAP1 (-11116), HOXB1 (+89691)
chr1	161898353	161900847	OLFML2B (+94044), ATF6 (+163516)
chr8	29347574	29348234	DUSP4 (-139719), TMEM66 (+592819)
chr3	78850257	78852028	ROBO1 (+965822)
chr12	76034215	76036420	KRR1 (-129917), PHLDA1 (+392394)
chr18	46358828	46361999	SMAD7 (+116667), CTIF (+294885)
chr20	36451053	36451554	VSTM2L (-80202), CTNBL1 (+128896)
chr7	150199020	150202863	GIMAP7 (-10976), GIMAP8 (+53224)

chr6	128270966	128274645	THEMIS (-50580), PTPRK (+568922)
chr5	146129911	146134740	GPR151 (-236573), PPP2R2B (+303211)
chr6	131518490	131522758	ARG1 (-373741), AKAP7 (+63818)
chr14	71407416	71409986	SIPA1L1 (-587341), PCNX (+34579)
chr13	84708985	84712785	SLITRK1 (-254357)
chr7	3102080	3103604	SDK1 (-238238), CARD11 (-19263)
chr6	108050798	108063960	SCML4 (+88137), SOBP (+246217)
chr11	111401322	111404002	BTG4 (-19583), LAYN (-8722)
chr10	88170377	88173821	GRID1 (-45864), WAPAL (+109473)
chr19	30111690	30116269	PLEKHF1 (-41983), POP4 (+19056)
chr14	98084091	98088064	VRK1 (+822437)
chr21	16048245	16048893	SAMSN1 (-92846), NRIP1 (+388752)
chr17	20202833	20205699	LGALS9B (+166582), SPECC1 (+213931)
chr2	175704947	175705573	CHRNA1 (-76071), CHN1 (+164694)
chr12	50055168	50059785	PRPF40B (+40258), FMNL3 (+43720)
chr17	29640259	29640905	EVI2B (+548)
chr19	42376070	42376783	CD79A (-4763)
chr21	35691547	35693150	KCNE2 (-43974), SLC5A3 (+246479)
chr1	200119686	200124971	NR5A2 (+125599), ZNF281 (+256855)
chr1	231746297	231751403	DISC1 (-13711), TSNAX (+84451)
chr2	99079762	99082494	INPP4A (+19807), COA5 (+143827)
chrX	45617985	45618486	KRBOX4 (-688056), CXorf36 (-558090)
chr21	46076563	46079939	KRTAP12-4 (-3675), KRTAP12-3 (+402)
chr2	101977127	101979470	RNF149 (-53141), CREG2 (+25758)
chr13	42970759	42971260	TNFSF11 (-177279), AKAP11 (+124721)
chr1	156839851	156841778	PEAR1 (-22697), NTRK1 (+10129)
chr14	106961933	106965521	TMEM121 (+970787)
chr2	192351234	192352778	NABP1 (-191252), MYO1B (+241891)
chr5	86375698	86378579	RASA1 (-186566), COX7C (+463366)
chr7	30777094	30779531	CRHR2 (-38594), INMT (-13438)
chr2	106542610	106547596	C2orf40 (-137009), NCK2 (+183749)
chr1	206929423	206933157	IL10 (+14549), MAPKAPK2 (+72908)
chr21	30202914	30210545	N6AMT1 (+50963)
chr19	35728949	35732975	FAM187B (-11330), LSR (-8661)
chr10	11443178	11445797	USP6NL (+129786), CELF2 (+384595)
chr2	175008	178326	FAM110C (-130282), SH3YL1 (+87398)
chr13	51467246	51467747	RNASEH2B (-16317), DLEU1 (+811190)
chr18	10366757	10367258	APCDD1 (-87617), VAPA (+452949)
chr2	158750624	158757932	PKP4 (-559346), UPP2 (+21064)
chr2	161085084	161085585	ITGB6 (-28523), RBMS1 (+264970)
chr10	24438713	24442149	KIAA1217 (-57662), OTUD1 (+712233)
chr5	33789365	33790031	ADAMTS12 (+102599), TARS (+348627)
chr7	150362735	150363825	GIMAP6 (-33807), GIMAP2 (-19508)
chr3	32154705	32157147	CMTM8 (-124245), GPD1L (+7923)
chr1	90184495	90185784	LRRC8D (-101451), LRRC8C (+86509)
chr2	189678666	189679167	COL3A1 (-160129), GULP1 (+521358)
chr16	28320033	28324335	SBK1 (+18344), EIF3CL (+92981)
chr17	3666276	3671862	ITGAE (+35468), GSG2 (+41858)
chr6	45769730	45770231	SUPT3H (-424311), CLIC5 (+278151)
chr11	118173022	118193003	CD3E (+7753), CD3D (+30446)
chr13	27294794	27296848	GPR12 (+39101), WASF3 (+163934)
chr10	15246604	15252584	NMT2 (-38902), FAM171A1 (+163464)
chr1	198578283	198585914	ATP6V1G3 (-72024), PTPRC (-26071)
chr20	1664196	1668203	SIRPA (-209742), SIRPG (-27775)
chr19	6651661	6656359	CD70 (-62847), TNFSF14 (+16589)
chr8	134626995	134631398	ST3GAL1 (-45014)

chr3	109523102	109528242	DPPA4 (-469253)
chr3	188634319	188635529	TPRG1 (-254839), LPP (+704203)
chr1	172606192	172610972	FASLG (-19576), SUCO (+106225)
chr2	113387908	113390104	SLC20A1 (-14428), CHCHD5 (+46988)
chr20	43299712	43301515	WISP2 (-42871), ADA (-20231)
chr17	10150720	10151221	GAS7 (-49103), MYH13 (+125476)
chr10	6570013	6573620	PRKCQ (+50446), PFKFB3 (+326923)
chr6	160880686	160884963	SLC22A3 (+113525), LPA (+204582)
chr20	36449171	36453215	VSTM2L (-80313), CTNBNL1 (+128785)
chr1	245913747	245915905	KIF26B (+596539), SMYD3 (+755693)
chr16	3675104	3677959	DNASE1 (-25306), SLX4 (-14933)
chr7	105488528	105493041	EFCAB10 (-268842), CDHR3 (-112900)
chr1	93001485	93004833	GFI1 (-53648), EVI5 (+254802)
chr10	27009449	27011763	PDSS1 (+24018), ABI1 (+139258)
chr5	93908829	93916282	FAM172A (-465216), ANKRD32 (-41496)
chr1	193505956	193512515	B3GALT2 (-353452)
chr1	59395158	59395926	FGGY (-367111), JUN (-145757)
chr7	68741545	68742418	AUTS2 (-322337)
chr2	106710607	106711108	C2orf40 (+28746), UXS1 (+99937)
chr1	197746373	197746874	DENND1B (-2169)
chr2	61045794	61047793	REL (-61862), PAPOLG (+63429)
chr9	127725966	127729939	GOLGA1 (-24575), SCAI (+177822)
chr18	10304242	10305701	APCDD1 (-149653), VAPA (+390913)
chr9	77760489	77769313	PCSK5 (-740659), OSTF1 (+61442)
chr8	66864600	66866727	PDE7A (-111477), DNAJC5B (-68131)
chr5	130403392	130406468	HINT1 (+96248)
chr1	186157655	186158156	PRG4 (-107505), HMCN1 (+454223)
chr12	67753128	67753629	DYRK2 (-289122), CAND1 (+90318)
chr1	198159360	198160052	NEK7 (+33613), ATP6V1G3 (+350369)
chr4	78746735	78750312	MRPL1 (-35150), CNOT6L (-7980)
chr21	35704706	35712949	KCNE2 (-27495), SLC5A3 (+262958)
chr4	4267906	4273265	TMEM128 (-20647), LYAR (+21310)
chr21	27566992	27568491	APP (-24770), CYR1 (+377861)
chr5	86377578	86378079	RASA1 (-185876), COX7C (+464056)
chr2	198186440	198190386	ANKRD44 (-12902), SF3B1 (+111402)
chr20	1711451	1713510	SIRPA (-163461), SIRPG (-74056)
chr2	231181635	231185037	SP140L (-8563), SP140 (+92890)
chr6	34149232	34151881	HMGA1 (-54093), GRM4 (-49114)
chr12	90272120	90278238	ATP2B1 (-172571)
chr17	63173667	63179923	RGS9 (+43203), AXIN2 (+380970)
chr3	54908909	54910043	LRTM1 (+52625), CACNA2D3 (+752783)
chr15	51116685	51119254	AP4E1 (-82900), SPPL2A (-59965)
chr6	69465757	69466258	BAI3 (+120749)
chr1	84609279	84610525	PRKACB (-52)
chr1	98854366	98854867	DPYD (-468038), SNX7 (-272662)
chr10	31389293	31391440	ZEB1 (-217734), ZNF438 (-69501)
chr2	181988127	181993464	ITGA4 (-331156), UBE2E3 (+145463)
chr2	48319903	48320404	FOXN2 (-221695), FBXO11 (-187222)
chr2	48315122	48318201	FOXN2 (-225187), FBXO11 (-183730)
chr8	129586839	129590085	TMEM75 (-627871)
chr1	16746405	16748515	RSG1 (-183803), SPATA21 (+16459)
chr8	49319315	49323469	EFCAB1 (+326399), UBE2V2 (+400432)
chr1	30180789	30184847	PTPRU (+619790)
chr9	75056470	75058230	TMC1 (-79367), ZFAND5 (-77187)
chr14	62604586	62607472	SYT16 (+143488), KCNH5 (+906144)
chr22	23094680	23103469	IGLL5 (-130885), GGTL2 (+110259)

chrX	39711662	39717937	BCOR (+241856)
chr2	168887693	168888194	B3GALT1 (+212762), STK39 (+216707)
chr4	156514644	156515145	MAP9 (-216773), GUCY1A3 (-73455)
chr6	139446301	139448105	REPS1 (-137805), HECA (-9046)
chr4	158963136	158963870	FAM198B (+130699), GRIA2 (+821633)
chr5	130405856	130406357	HINT1 (+95071)
chr6	149357201	149357702	TAB2 (-284736), UST (+288988)
chr12	40075968	40078098	ABCD2 (-63480), SLC2A13 (+422628)
chr4	169552261	169554306	PALLD (+135029), CBR4 (+378125)
chr10	73843915	73844416	SPOCK2 (+4365), CHST3 (+120043)
chr16	79311186	79314495	MAF (+321770)
chr10	7526666	7527451	SFMBT2 (-75756), ITIH5 (+181875)
chr8	117435915	117436416	TRPS1 (-754938), EIF3H (+331894)
chr11	89190002	89193520	NOX4 (+32892), TYR (+281141)
chr2	38908095	38912823	GALM (+17407), SRSF7 (+68177)
chr18	43265152	43269676	SLC14A1 (-39276), SLC14A2 (+72648)
chr5	109190887	109196636	MAN2A1 (+168695), TMEM232 (+868604)
chr6	86377272	86381184	SYNCRIP (-26225)
chr7	8163860	8192721	ICA1 (+123620), GLCCI1 (+169866)
chr1	66961461	66961962	SGIP1 (-38253), PDE4B (+703515)
chr12	131351867	131354112	RAN (-3434)
chr2	197063135	197067844	STK17B (-29191), HECW2 (+391845)
chr1	78805372	78805873	PTGFR (-151134), GIPC2 (+294037)
chr4	157219875	157220376	CTSO (-345057), PDGFC (+672420)
chr4	6178808	6186584	CRMP1 (-287911), JAKMIP1 (+19586)
chr15	22481740	22485082	TUBGCP5 (-349984), OR4N4 (+101029)
chr6	128573821	128574322	THEMIS (-351846), PTPRK (+267656)
chr12	27332343	27332844	STK38L (-64514), MED21 (+157111)
chr1	202597054	202598713	SYT2 (+14697), PPP1R12B (+280057)
chr3	114003674	114005983	ZNF80 (-48404), TIGIT (-5120)
chr7	134353049	134355968	CALD1 (-109892), BPGM (+22926)
chr18	10251872	10254935	APCDD1 (-201221), VAPA (+339345)
chr9	118376666	118379982	PAPPA (-537759), DEC1 (+474227)
chr7	92534127	92534628	CDK6 (-71147), SAMD9 (+212958)
chr4	164583040	164589490	TKTL2 (-191218), MARCH1 (+718937)
chr5	42985030	42985531	SEPP1 (-173100), ZNF131 (-136419)
chr1	160765956	160766917	LY9 (+489)
chr6	135448736	135451339	HBS1L (-74002), MYB (-52415)
chr15	82374429	82374930	MEX3B (-36198), EFTUD1 (+180424)
chr12	9515492	9519753	PZP (-156657), KLRB1 (+242859)
chr20	51022194	51024690	TSHZ2 (-565504), ZFP64 (-214917)
chr10	6583655	6587860	PRKCQ (+36505), PFKFB3 (+340864)
chr2	231466290	231469334	CAB39 (-109748), SP100 (+186831)
chr6	128253820	128257185	THEMIS (-33277), PTPRK (+586225)
chr2	198190918	198194067	ANKRD44 (-16982), SF3B1 (+107322)
chr10	127843151	127843785	ADAM12 (+233556), FANK1 (+258360)
chr2	69498992	69499635	GFPT1 (+115068), ANTXR1 (+259004)
chr4	122109736	122114413	NDNF (-118402), TNIP3 (+36546)
chr4	156820143	156823804	TDO2 (-2873)
chr1	239880776	239885688	FMN2 (-371948), CHRM3 (+90859)
chr9	92033554	92034055	SEMA4D (-57)
chr3	78785068	78788022	NONE
chr2	113463007	113468033	NT5DC4 (-13543), SLC20A1 (+62086)
chr1	114402798	114403299	RSBN1 (-47951), PTPN22 (+11332)
chr5	76026117	76031015	F2RL1 (-86236), F2R (+16698)
chr4	99367337	99367838	RAP1GDS1 (+184919), TSPAN5 (+212192)

chr6	128222270	128222902	THEMIS (-360)
chr3	46317689	46345641	CCR2 (-63570), CCR3 (+47793)
chr3	122477773	122478274	HSPBAP1 (+34647), PARP14 (+78559)
chr3	111259920	111270842	CD96 (+4416), ZBED2 (+48909)
chr8	82411709	82412381	FABP4 (-16547), FABP12 (+31568)
chr8	135053713	135057365	ST3GAL1 (-471356), ZFAT (+669742)
chr12	92449067	92451171	DCN (-873219), BTG1 (+89554)
chr1	114882886	114886275	SYT6 (-188109), TRIM33 (+169200)
chr1	175177259	175181143	TNN (+142207), TNR (+533705)
chr21	16885661	16887834	NRIP1 (-449427), USP25 (-215596)
chr20	42379128	42381600	TOX2 (-163128), GTSF1L (-24726)
chr14	81395529	81399050	DIO2 (-719447), CEP128 (+10839)
chr11	89191216	89192511	NOX4 (+32789), TYR (+281244)
chr1	219596146	219596647	LYPLAL1 (+249211), SLC30A10 (+505547)
chr12	67908162	67911718	DYRK2 (-132561), CAND1 (+246879)
chr10	6514443	6517764	PRKCQ (+106159), PFKFB3 (+271210)
chr3	128641201	128643219	EFCC1 (-78262), ACAD9 (+43756)
chr22	39510586	39515064	APOBEC3H (+19545), CBX7 (+35830)
chr14	76341580	76347447	TGFB3 (+103020), TTLL5 (+216893)
chr7	40337374	40337875	C7orf10 (+163050)
chr1	167586598	167587099	CREG1 (-63845), RCS1 (-12481)
chr1	111178182	111178836	KCNA2 (-28458), KCNA3 (+39146)
chr14	76298257	76298885	TGFB3 (+148963), TTLL5 (+170950)
chr7	24494764	24497580	MPP6 (-116913), NPY (+172365)
chr13	42927196	42931577	TNFSF11 (-218902), AKAP11 (+83098)
chr19	6801325	6803162	EMR1 (-85339), VAV1 (+29507)
chr2	85173145	85173915	KCMF1 (-24686), TMSB10 (+40781)
chr10	26768943	26769444	PDSS1 (-217394), APBB1IP (+42062)
chr6	149366464	149368223	TAB2 (-274844), UST (+298880)
chr16	84551289	84553814	TLDC1 (-14188), COTL1 (+99131)
chr3	99748318	99754169	FILIP1L (+82113), COL8A1 (+393925)
chr21	36135507	36136225	CLIC6 (+94178), RUNX1 (+285775)
chr13	95920541	95921042	SOX21 (-556403), ABCC4 (+32891)
chr1	167478905	167488722	CD247 (+3961), POU2F1 (+293748)
chr2	237450101	237450902	IQCA1 (-34317), ACKR3 (-27782)
chr16	31880100	31881588	ZNF267 (-4235)
chr10	7086540	7090299	PRKCQ (-466157), SFMBT2 (+362883)
chr12	69798515	69799150	FRS2 (-65296), YEATS4 (+45350)
chr11	132226816	132229261	NTM (+446683), OPCML (+585527)
chr3	27753616	27764399	SLC4A7 (-260763), EOMES (+4981)
chr10	127933029	127933710	ADAM12 (+143654), FANK1 (+348262)
chr5	52038357	52042202	ITGA1 (-43450)
chr3	114882015	114885290	ZBTB20 (-781165), GAP43 (-458704)
chr10	7548547	7551136	SFMBT2 (-98539), ITIH5 (+159092)
chr13	21002770	21003271	GJB6 (-196487), CRYL1 (+96975)
chr1	83568798	83569299	TTLL7 (+895766)
chr2	204856555	204860689	PARD3B (-552101), ICOS (+57151)
chr9	135523378	135523879	GTF3C4 (-21793), BARHL1 (+66057)
chr18	53456541	53458263	TCF4 (-154217), TXNL1 (+848474)
chr17	3673225	3674837	ITGAE (+30506), GSG2 (+46820)
chr12	106377918	106378593	APPL2 (-748395), NUA1 (+155555)
chr20	11125205	11125706	JAG1 (-470762)
chr6	30978003	30978504	MUC22 (+3)
chr20	35595144	35604869	SAMHD1 (-19761), RBL1 (+124391)
chr9	91651396	91651897	S1PR3 (+40226), SHC3 (+142035)
chr1	198904810	198906714	PTPRC (+297592)



chr1	160545538	160546039	SLAMF6 (-52746), CD84 (+3505)
chr8	126537300	126538621	TRIB1 (+95398)
chr8	49318285	49323865	EFCAB1 (+326716), UBE2V2 (+400115)
chr18	76915989	76918459	NFATC1 (-243112), ATP9B (+87830)
chr7	134309965	134310466	BPGM (-21367), AKR1B15 (+76328)
chr11	103668213	103668714	DDI1 (-238844), DYNC2H1 (+688160)
chr6	24947481	24958018	LRRC16A (-326906), FAM65B (-41555)
chr2	196474756	196475425	SLC39A10 (-46380)
chr3	159887144	159887645	C3orf80 (-56028), IL12A (+180858)
chr3	98266577	98288499	GPR15 (+26795), CPOX (+35029)
chr5	143568949	143569450	YIPF5 (-18977), KCTD16 (-15640)
chr21	40138686	40139187	ERG (-105319), ETS2 (-38294)
chr7	55374643	55378677	LANCL2 (-56481), EGFR (+289866)
chr5	148226158	148231384	ADRB2 (+22615), SH3TC2 (+213916)
chr3	10436270	10439245	SEC13 (-74896), ATP2B2 (+109510)
chr1	90203975	90207236	LRRC8D (-80985), LRRC8C (+106975)
chr2	102012128	102012863	CREG2 (-8439), RFX8 (+78669)
chr15	33120156	33120657	GREM1 (+110232), FMN1 (+239678)
chr11	34634115	34637467	ELF5 (-102445), EHF (-18220)
chr10	7512255	7516059	SFMBT2 (-62854), ITIH5 (+194777)
chr6	45587952	45588453	SUPT3H (-242533), CLIC5 (+459929)
chrX	53740211	53745674	HUWE1 (-31829), PHF8 (+328739)
chr8	121791451	121792102	SNTB1 (+33736), MTBP (+334111)
chr10	7070605	7071106	PRKCQ (-448593), SFMBT2 (+380447)
chr3	99114706	99116199	DCBLD2 (-494920), COL8A1 (-241866)
chr20	51018512	51029692	TSHZ2 (-564844), ZFP64 (-215577)
chr22	40294686	40318612	TNRC6B (-267280), GRAP2 (+9563)
chr3	9321402	9323525	THUMPD3 (-82272), SRGAP3 (-31401)
chr8	52090586	52091431	PXDNL (+630996)
chr3	108320966	108323738	DZIP3 (+13823), RETNLB (+153879)
chr2	38935176	38938378	SRSF7 (+41859), GALM (+43725)
chr3	167657646	167658275	GOLIM4 (+155802), SERPINI1 (+204450)
chr6	146185909	146189673	FBXO30 (-51902), SHPRH (+97734)
chrX	47220959	47222417	ZNF157 (-8294), USP11 (+129374)
chr10	26734030	26739969	PDSS1 (-249588), APBB1IP (+9868)
chr17	46587568	46589437	SKAP1 (-80951), HOXB1 (+19856)
chr1	170258877	170262648	GORAB (-240507), METTL11B (+145621)
chr15	75072654	75073315	CSK (-1413)
chr2	87795239	87795740	PLGLB1 (-546515), PLGLB2 (-252116)
chr10	72422305	72423276	PRF1 (-60260), ADAMTS14 (-9768)
chr19	54875996	54876756	LAIR1 (+188)
chr1	170414668	170415169	GORAB (-86351), METTL11B (+299777)
chr1	42148848	42149349	EDN2 (-198757), HIVEP3 (+235070)
chr10	70959829	70966597	HKDC1 (-16846), SUPV3L1 (+23225)
chr5	156604703	156627524	CYFIP2 (-77024), ITK (+8277)
chr3	113948946	113955155	DRD3 (-54152), ZNF80 (+4374)
chr16	29748907	29751133	C16orf54 (+7307), QPRT (+59662)
chr6	25036895	25037563	LRRC16A (-242427), FAM65B (-126034)
chr9	21575499	21580783	MTAP (-224401), IFNE (-95829)
chr1	40524764	40526064	CAP1 (+19509), PPT1 (+37961)
chr6	105626636	105628410	POPDC3 (+212)
chr1	41093278	41096763	RIMS3 (+36308), ZNF684 (+97788)
chr6	143497136	143497637	AIG1 (+115374), ADAT2 (+274423)
chr11	76411936	76412437	TSKU (-90609), LRRC32 (-31143)
chr1	233056692	233062258	NTPCR (-26895), MAP10 (+118832)
chr7	76435671	76436172	POMZP3 (-179364), FGL2 (+393221)

chr18	10376684	10380132	APCDD1 (-76217), VAPA (+464349)
chr19	51625920	51628840	SIGLEC9 (-785)
chr16	64474636	64475137	CDH11 (+681214)
chr1	162598867	162599368	DDR2 (-3137)
chr13	37956069	37957038	CSNK1A1L (-276751), POSTN (+216427)
chr6	29676934	29677435	ZFP57 (-32254), HLA-F (-14000)
chr20	19476493	19478702	RIN2 (-389567), SLC24A3 (+284308)
chr3	72804907	72807455	RYBP (-310112), SHQ1 (+91450)
chr2	9794554	9797685	TAF1B (-187363), YWHAQ (-25375)
chr1	64758190	64758691	CACHD1 (-178034), UBE2U (+88951)
chr1	160677037	160677538	SLAMF1 (-60203), CD48 (+4353)
chr8	136220083	136226600	ZFAT (-498061), KHDRBS3 (-246358)
chr9	80815241	80817253	GNAQ (-169873), CEP78 (-34876)
chr18	11516814	11517315	PIEZO2 (-368478), GNAL (-171890)
chr1	160708062	160721378	LY9 (-51228), SLAMF7 (+5665)
chr14	99449059	99451867	BCL11B (+287102)
chr10	24438765	24442963	KIAA1217 (-57229), OTUD1 (+712666)
chr1	32291288	32294170	SPOCD1 (-11077), PTP4A2 (+111259)
chr5	153577881	153578382	SAP30L (-247385), GALNT10 (+7842)
chr10	63988622	64005863	RTKN2 (+31223), ARID5B (+336184)
chr5	78077133	78080357	LHFPL2 (-134097), ARSB (+202863)
chr2	54220494	54224536	ACYP2 (-120126), PSME4 (-24538)
chr3	46395443	46396241	CCR2 (+607)
chr5	131309769	131312044	FNIP1 (-178197), ACSL6 (+36448)
chr20	56501586	56504345	PMEP1 (-218008), PPP4R1L (+381529)
chr6	44615198	44615699	RUNX2 (-680657), CDC5L (+260187)
chr3	71544868	71545974	FOXP1 (-365433), EIF4E3 (+229105)
chr14	98653581	98654082	NONE
chr9	3397252	3399095	KIAA0020 (-553933), RFX3 (+127809)
chr6	122205356	122205857	HSF2 (-515084), GJA1 (+448769)
chr8	124107482	124109490	TBC1D31 (+23566), ZHX1 (+178249)
chr7	151464792	151467889	RHEB (-249331), PRKAG2 (+107869)
chr18	10365011	10365512	APCDD1 (-89363), VAPA (+451203)
chr7	106765890	106768255	HBP1 (-42387), PRKAR2B (+81979)
chr15	77558482	77561022	TSPAN3 (-196182), ENSG00000173517 (+152734)
chr9	92147733	92155281	SEMA4D (-117759), GADD45G (-68421)
chr5	153051399	153051900	GRIA1 (+179918), FAM114A2 (+366829)
chr6	21263567	21266919	SOX4 (-328729), CDKAL1 (+730555)
chr12	55370489	55380382	TESPA1 (+3020), MUCL1 (+127115)
chr8	29636679	29637830	DUSP4 (-429070), TMEM66 (+303468)
chr16	23958244	23964833	CACNG3 (-305335), PRKCB (+114194)
chr15	52336797	52340381	MAPK6 (+27191), BCL2L10 (+66383)
chr9	139988833	139992066	MAN1B1 (+9071), DPP7 (+18720)
chr3	32412144	32414527	CMTM7 (-19827), CMTM8 (+133165)
chr2	25599916	25600417	DNMT3A (-34708), DTNB (+296336)
chr17	20203786	20204428	LGALS9B (+166741), SPECC1 (+213772)
chr10	71851519	71853726	AIFM2 (+40067), H2AFY2 (+40071)
chr6	138087607	138090686	OLIG3 (-273616), TNFAIP3 (-99434)
chr11	121351678	121355767	SORL1 (+30811), BLID (+633200)
chr2	317228	318893	FAM150B (-29765), TMEM18 (+359378)
chr10	5605358	5608385	CALML3 (+39948), ASB13 (+101669)
chr9	92133045	92147246	SEMA4D (-106398), GADD45G (-79782)
chr2	134990169	134991830	MGAT5 (+113247), TMEM163 (+485570)
chr15	60095179	60096821	FOXB1 (-200421), BNIP2 (-114267)
chr3	46342823	46343532	CCR2 (-52057), CCR3 (+59306)
chr10	19025467	19029071	C10orf112 (-465510), ARL5B (+78935)

chr17	29655712	29656655	RAB11FIP4 (-62458), EVI2A (-7417)
chr2	225806551	225825252	CUL3 (-365837), DOCK10 (+91257)
chr15	52772711	52777375	MYO5C (-187048), MYO5A (+46204)
chr14	93044282	93044783	RIN3 (+64415), LGMN (+170491)
chr3	151912737	151913238	MBNL1 (-72841), SUCNR1 (+321557)
chr4	81058515	81062386	ANTXR2 (-66734), PRDM8 (-45973)
chrX	19822153	19824380	MAP3K15 (-289888), SH3KBP1 (+82452)
chr5	111265718	111266543	STARD4 (-417923), NREP (+46497)
chr12	22382892	22383393	ST8SIA1 (+104505), CMAS (+184035)
chrX	70415403	70418708	GJB1 (-18006), NLGN3 (+52344)
chrX	78350567	78354479	GPR174 (-73946), P2RY10 (+151605)
chr3	177358634	177363051	KCNMB2 (-915645), TBL1XR1 (-446577)
chr17	60867817	60868318	MARCH10 (+17627), MRC2 (+163306)
chr5	148777177	148777678	IL17B (-18589), CSNK1A1 (+153099)
chr2	238033328	238033829	COPS8 (+39624), COL6A3 (+289439)
chr2	204815992	204816621	PAR3B (-594416), ICOS (+14836)
chr6	45622844	45625012	SUPT3H (-278258), CLIC5 (+424204)
chr16	87927105	87932951	SLC7A5 (-26934), CA5A (+40094)
chr19	33650672	33652484	LRP3 (-33912), GPATCH1 (+79792)
chr1	30180390	30186380	PTPRU (+620357)
chr4	99366494	99370927	RAP1GDS1 (+186042), TSPAN5 (+211069)
chr2	189461995	189468712	COL3A1 (-373692), GULP1 (+307795)
chr2	227758460	227759283	RHBDD1 (+58201), COL4A4 (+269957)
chr9	79191205	79191875	GCNT1 (+134958), PRUNE2 (+329463)
chr11	89112191	89117537	NOX4 (+109789), TYR (+204244)
chr3	99375000	99379333	COL8A1 (+19848), FILIP1L (+456190)
chr3	70861310	70862418	FOXP1 (+318124)
chr8	41371265	41375391	GIN54 (-13397), GOLGA7 (+25155)
chr1	111330223	111330724	KCNA3 (-112819), CD53 (-85302)
chr5	111289273	111289774	STARD4 (-441316), NREP (+23104)
chr1	246131984	246132485	SMYD3 (+538284), KIF26B (+813948)
chr2	74803140	74804946	DOK1 (+22830), M1AP (+71121)
chr7	116923740	116924241	WNT2 (+39352), ST7 (+330610)
chr11	118568930	118571992	TREH (-20080), DDX6 (+91384)
chr13	50893145	50895275	RNASEH2B (-589604), DLEU1 (+237903)
chr2	150505735	150506236	MMADHC (-61870), RND3 (+838195)
chr12	94675719	94677825	PLXNC1 (+134273), CCDC41 (+176956)
chr15	89610675	89611864	MFGE8 (-154628), ABHD2 (-20111)
chr10	20911722	20914814	NEBL (+273263), PLXDC2 (+808100)
chr12	67751187	67752167	DYRK2 (-290824), CAND1 (+88616)
chr12	9889519	9890237	CLECL1 (-3983)
chr9	137685817	137716331	FCN2 (-71584), COL5A1 (+167454)
chr4	152999756	153002968	PET112 (-319187), FBXW7 (+455891)
chr8	66862735	66863952	PDE7A (-109157), DNAJC5B (-70451)
chr17	34430188	34436258	CCL4 (+2240), TBC1D3B (+70765)
chr5	130881032	130886680	RAPGEF6 (+86948), CDC42SE2 (+284063)
chr6	130348296	130351378	L3MBTL3 (+14993), SAMD3 (+336733)
chr7	114570181	114572098	MDFIC (+8931)
chr8	23087720	23089226	CHMP7 (-12677), TNFRSF10A (-5834)
chr11	117829371	117831767	TMPRSS13 (-30489), IL10RA (-26494)
chr14	87614531	87615918	GALC (+844390)
chr6	21438810	21439311	SOX4 (-154911), CDKAL1 (+904373)
chr17	74992210	74996162	SEC14L1 (-90645), MGAT5B (+125457)
chr2	74801675	74802176	DOK1 (+20713), M1AP (+73238)
chr7	17617640	17625978	AHR (+283563), SNX13 (+358308)
chr5	130849151	130851588	RAPGEF6 (+120434), CDC42SE2 (+250577)

chr20	32391305	32392276	CHMP4B (-7319), ZNF341 (+72328)
chr12	89861374	89864304	DUSP6 (-115791), GALNT4 (+55744)
chr5	983609	984422	BRD9 (-91077), NKD2 (-24928)
chr18	12047787	12050812	ANKRD62 (-53405), IMPA2 (+67873)
chr1	72121826	72127879	ZRANB2 (-577873), NEGR1 (+623564)
chr12	31956427	31958087	BICD1 (-302906), H3F3C (-12082)
chr6	139446019	139451165	REPS1 (-139194), HECA (-7657)
chr2	27612606	27616132	ZNF513 (-10777), PPM1G (+18185)
chr15	80258383	80264797	ST20-MTHFS (-45504), BCL2A1 (+2198)
chr3	148994315	148996171	CP (-55401), TM4SF18 (+56305)
chr13	38019816	38022674	CSNK1A1L (-341442), POSTN (+151736)
chr17	42634181	42634814	FZD2 (-427)
chr18	21580563	21581064	CABYR (-138128), LAMA3 (+311407)
chr18	56281077	56284248	ALPK2 (+13526), NEDD4L (+571053)
chr18	67611331	67618218	CD226 (+9457), DOK6 (+546484)
chr9	116430719	116431220	ZNF618 (-207592), RGS3 (+223959)
chr3	55032746	55034644	LRTM1 (-71594), WNT5A (+490278)
chr7	105086518	105091217	SRPK2 (-59527), PUS7 (+73837)
chr17	63169850	63170351	RGS9 (+36509), AXIN2 (+387664)
chr3	46254729	46255230	CCR3 (-28892), CCR1 (-5093)
chr2	225813432	225813933	CUL3 (-363618), DOCK10 (+93476)
chr10	128084061	128087414	ADAM12 (-8714), C10orf90 (+124272)
chr2	69915909	69923538	ANXA4 (-49382), AAK1 (-48875)
chr2	85165146	85168639	KCMF1 (-31323), TMSB10 (+34144)
chr16	86618505	86620602	FOXL1 (+7439), FBXO31 (+797809)
chr14	39701863	39702364	MIA2 (-1006)
chr1	173173327	173177058	TNFSF18 (-155090), TNFSF4 (+1259)
chr1	33262703	33267548	SYNC (-96406), S100BPB (-18030)
chr16	57868201	57870374	KIFC3 (-32788), CNGB1 (+135728)
chr2	112938742	112942226	FBLN7 (+44522), ZC3H8 (+72204)
chr1	161898334	161905305	OLFML2B (+91824), ATF6 (+165736)
chr4	156548997	156552451	MAP9 (-252602), GUCY1A3 (-37626)
chr12	104878603	104879104	CHST11 (+28103), SLC41A2 (+443579)
chr7	107718443	107719072	LAMB1 (-75058), LAMB4 (+52043)
chr1	23938055	23942350	RPL11 (-78066), ID3 (-53918)
chr6	52253048	52260113	EFHC1 (-28525), PAQR8 (+29655)
chr2	235072022	235076018	SPP2 (+114677), ARL4C (+331677)
chr1	226612141	226614039	C1orf95 (-123411), PARP1 (-17316)
chr6	75287276	75289234	COL12A1 (+627512), CD109 (+882428)
chrX	30592656	30597088	NROB1 (-267157), GK (-76604)
chr11	106913421	106914104	GUCY1A2 (-24592), CWF19L2 (+414807)
chr4	154719976	154720477	SFRP2 (-9955), DCHS2 (+592222)
chr2	68649959	68657731	APLF (-40848), PLEK (+61540)
chr5	126083122	126085059	LMNB1 (-28749), PHAX (+148131)
chr7	8053970	8055690	GLCCI1 (+46405), ICA1 (+247081)
chr11	128397240	128397946	ETS1 (+59844)
chr9	27785153	27785654	C9orf72 (-211956), LINGO2 (+884879)
chr9	139990474	139990975	MAN1B1 (+9346), DPP7 (+18445)
chr13	37743153	37743812	CSNK1A1L (-63680), POSTN (+429498)
chrX	23971831	23972332	APOO (-46031), KLHL15 (+73221)
chr10	63990203	63990704	RTKN2 (+38012), ARID5B (+329395)
chr18	10070264	10070765	APCDD1 (-384110), VAPA (+156456)
chr1	101748523	101750811	S1PR1 (+47223), OLFM3 (+712919)
chr15	41277482	41278211	CHAC1 (+32500), INO80 (+130705)
chr5	168908	169609	SDHA (-49097), PLEKHG4B (+28886)
chr10	72410868	72417625	PRF1 (-51716), ADAMTS14 (-18312)

chr1	222097493	222097994	DUSP10 (-182226), HHIPL2 (+623701)
chr20	36903406	36905253	TGM2 (-110556), BPI (-28195)
chr21	35653238	35653739	KCNE2 (-82834), SLC5A3 (+207619)
chr19	6575766	6578871	CD70 (+13844), TNFSF9 (+46309)
chr8	66855761	66856262	PDE7A (-101825), DNAJC5B (-77783)
chr2	42522259	42527406	COX7A2L (+71317), EML4 (+128343)
chr5	111332359	111335983	NREP (-21543), EPB41L4A (+420842)
chr2	99269346	99282885	UNC50 (+51074), MGAT4A (+71473)
chr2	146450155	146450656	NONE
chr6	25024865	25029011	LRR16A (-252718), FAM65B (-115743)
chr12	15696863	15701432	PTPRO (+223817), EPS8 (+243362)
chr6	122202970	122203471	HSF2 (-517470), GJA1 (+446383)
chrX	15799263	15801502	ZRSR2 (-8212), CA5B (+43990)
chr11	122956461	122959996	HSPA8 (-25186), CLMP (+107760)
chr6	106089881	106100630	PRDM1 (-438939), PREP (-244297)
chr2	237443142	237447768	ACKR3 (-32829), IQCA1 (-29270)
chr2	216581377	216584378	FN1 (-281983), MREG (+295468)
chr22	41371596	41372097	EP300 (-115943), RBX1 (+24484)
chr6	21634204	21635497	SOX4 (+40879), PRL (+662879)
chr5	169122694	169123195	FOX11 (-409956), DOCK2 (+58694)
chrX	47566094	47567689	ZNF81 (-129409), UXT (-48376)
chr5	39755442	39756142	PTGER4 (-923808), DAB2 (-330520)
chr9	137708067	137709938	FCN2 (-63655), COL5A1 (+175383)
chr10	63996256	63996757	RTKN2 (+31959), ARID5B (+335448)
chr10	14049803	14050834	FRMD4A (+322564), PRPF18 (+421392)
chr6	88355078	88355579	ORC3 (+55476), AKIRIN2 (+56598)
chr4	153473287	153478510	FBXW7 (-18646), TMEM154 (+125418)
chr17	37967736	37972160	IKZF3 (+50493), GRB7 (+74924)
chr16	21550269	21553486	NPIP3 (-120800), METTL9 (-58919)
chr6	135679767	135680268	AHI1 (+138865), MYB (+177565)
chrX	47566239	47568023	ZNF81 (-129170), UXT (-48615)
chr10	64376485	64381832	ADO (-185357), ZNF365 (+245208)
chr1	193425239	193433915	B3GALT2 (-273793)
chr12	27974000	27976085	KLHL42 (+42090), PTHLH (+149860)
chr2	238209083	238210134	COL6A3 (+113409), COPS8 (+215654)
chr2	43114011	43116370	HAAO (-95459), ZFP36L2 (+338557)
chr4	146219434	146223218	SMAD1 (-182637), OTUD4 (-120494)
chr14	25161685	25165346	GZMB (-60043), STXBP6 (+355987)
chrX	1619728	1620229	ASMTL (-48213), P2RY8 (+36021)
chr1	44261180	44262993	ARTN (-136905), ST3GAL3 (+88869)
chr1	195926753	195928648	KCNT2 (+649798)
chr1	231107270	231110762	C1orf198 (-104617), ARV1 (-5779)
chr21	28640489	28641405	ADAMTS5 (-302115)
chr16	53634382	53635191	AKTIP (-97624), RRGIP1L (+102971)
chr1	86618400	86623077	ZNHIT6 (-446638), COL24A1 (+1707)
chr2	204717570	204740329	CTLA4 (-3559)
chr5	50147638	50153531	ISL1 (-528336), PARP8 (+187813)
chr3	113547530	113550794	GRAMD1C (-8103), ATP6V1A (+83296)
chr4	122073131	122078849	NDNF (-82317), TNIP3 (+72631)
chr1	113588707	113590588	SLC16A1 (-90963), LRIG2 (-26183)
chr21	35705580	35706365	KCNE2 (-30350), SLC5A3 (+260103)
chr3	141530473	141530974	ATP1B3 (-64732), GRK7 (+33734)
chr13	49379051	49379997	FNDC3A (-170524), CYSLTR2 (+98573)
chr6	2936620	2938475	SERPINB9 (-34034), SERPINB6 (+24013)
chr4	158971566	158974785	FAM198B (+121026), GRIA2 (+831306)
chr22	27529921	27531264	CRYBA4 (+512665), MN1 (+666893)

chr10	5637496	5638558	ASB13 (+70514), CALML3 (+71103)
chr6	1285806	1287824	EXOC2 (-593704), FOXQ1 (-25860)
chr21	30820912	30823317	BACH1 (+150378), GRIK1 (+490115)
chr3	47078901	47080714	CCDC12 (-56336), SETD2 (+125649)
chr12	31838801	31841066	METTL20 (+27312), H3F3C (+105241)
chr2	97258889	97263356	KANSL3 (+42923), ARID5A (+58637)
chr9	94942389	94944339	SPTLC1 (-65706), IARS (+112618)
chr11	63318524	63322482	HRASLS2 (+10352), RARRES3 (+16210)
chr22	27005525	27007284	TPST2 (-20278), CRYBB1 (+7647)
chr2	204797118	204809378	PARD3B (-607475), ICOS (+1777)
chr10	72335146	72340308	PRF1 (+24804), PALD1 (+99150)
chr1	198154501	198163540	NEK7 (+32928), ATP6V1G3 (+351054)
chr16	30467892	30471399	ITGAL (-14333), SEPHS2 (-12598)
chr4	40266392	40268748	CHRNA9 (-69776), RHOH (+69043)
chr16	79305161	79306750	MAF (+328655)
chr1	205267211	205268418	NUAK2 (+23068), TMCC2 (+70511)
chr5	95872397	95874785	CAST (-124350), PCSK1 (-104607)
chr17	68402021	68402522	KCNJ2 (+236596)
chr3	39335157	39337960	CCR8 (-34638), CX3CR1 (-13333)
chr13	30508124	30513593	UBL3 (-86038), KATNAL1 (+370762)
chr22	42426418	42428279	WBP2NL (+32557), NAGA (+39485)
chr1	198636899	198637400	PTPRC (+28980)
chr5	178729585	178732387	ADAMTS2 (+41445), ZNF354C (+243570)
chr8	144272207	144273414	LY6H (-30683), GPIHBP1 (-22257)
chr12	75864855	75867124	GLIPR1 (-8470), GLIPR1L2 (+81140)
chr12	92601209	92604681	CLLU1 (-214790), BTG1 (-63272)
chr16	53482583	53495406	RBL2 (+20663), AKTIP (+48168)
chr14	103270957	103275162	AMN (-115933), TRAF3 (+29247)
chr10	64396684	64398727	ADO (-166810), ZNF365 (+263755)
chr12	42490672	42492788	GXYLT1 (+46951), PDZRN4 (+909480)
chr1	172323391	172323892	PIGC (+89584), DNM3 (+513021)
chr3	142888556	142891052	CHST2 (+51631), SLC9A9 (+677569)
chr1	160678260	160678920	SLAMF1 (-61505), CD48 (+3051)
chr17	3613256	3616851	P2RX5 (-15356), GSG2 (-12157)
chr6	149530548	149537615	TAB2 (-108106), UST (+465618)
chr13	100863151	100863652	PCCA (+122065), GGACT (+372849)
chr3	111333706	111337219	PLCXD2 (-58306), ZBED2 (-21173)
chr9	90937264	90938963	CDK20 (-348447), SPIN1 (-65220)
chr9	134053288	134057519	PPAPDC3 (-109677), NUP214 (+54456)
chr1	245425288	245428471	KIF26B (+108593)
chr21	46298633	46302403	PTTG1IP (-6766), ITGB2 (+48270)
chr9	86907369	86909135	SLC28A3 (+47346), RMI1 (+312539)
chr10	114128357	114130589	ACSL5 (-6483), TECTB (+85980)
chr18	41515317	41516272	SETBP1 (-745068), SYT4 (-658180)
chr10	88170037	88174476	GRID1 (-46022), WAPAL (+109315)
chr22	32312579	32314626	YWHAH (-26844), DEPDC5 (+162765)
chr1	171086345	171086846	FMO6P (-20645), FMO3 (+26578)
chr13	37708202	37709383	CSNK1A1L (-28990), POSTN (+464188)
chr2	135425915	135429812	TMEM163 (+48706), MGAT5 (+550111)
chrX	3181319	3181820	MXRA5 (+83112), ARSF (+222058)
chr6	75381392	75382084	COL12A1 (+534029), CD109 (+975911)
chr11	46268446	46272028	PHF21A (-127676), CREB3L1 (-28975)
chr1	169648500	169681623	SELP (-65712), SELL (+15777)
chr6	38355339	38355840	BTBD9 (+252110), ZFAND3 (+568315)
chr18	46392966	46396767	SMAD7 (+82214), CTIF (+329338)
chr4	36255828	36259347	DTHD1 (-28056), ARAP2 (-11457)

chr10	25182505	25184729	ARHGAP21 (-171020), PRTFDC1 (+57916)
chr12	58894581	58899699	LRIG3 (+417163), XRCC6BP1 (+561780)
chr2	183363987	183364846	PDE1A (+22887), PPP1R1C (+513813)
chr4	148044549	148045222	EDNRA (-357198), POU4F2 (+484841)
chr2	36466870	36469468	CRIM1 (-114900)
chr1	84154878	84156885	TTLL7 (+308933)
chr11	122726449	122728538	CRTAM (+18286), BSX (+124934)
chr6	80926808	80927582	BCKDHB (+110831)
chr11	127905087	127912901	ETS1 (+548443)
chr1	77737107	77738299	PIGK (-52592), AK5 (-10033)
chr7	40259859	40263266	C7orf10 (+86988)
chr10	127837312	127837813	ADAM12 (+239461), FANK1 (+252455)
chr5	100187790	100191537	STSIA4 (+49306), FAM174A (+318655)
chr22	24183333	24183834	DERL3 (-2391)
chr4	39028702	39035663	TMEM156 (+1858), FAM114A1 (+162746)
chr12	122727077	122732063	DIABLO (-17489), ENSG00000256861 (+21400)
chr3	187710857	187713427	BCL6 (-248627), LPP (-218579)
chr21	36883650	36884949	RUNX1 (-462659), SETD4 (+548259)
chr8	129553851	129554352	TMEM75 (-593511)
chr1	93437189	93448413	MTF2 (-101994), FAM69A (-15744)
chr7	36814443	36821530	AOAH (-53834), ELMO1 (+670865)
chr13	30528430	30528931	UBL3 (-103860), KATNAL1 (+352940)
chr1	145500860	145503901	RBM8A (-5217), LIX1L (+25296)
chr16	14602593	14606595	PARN (+119530), MKL2 (+431449)
chr6	105956780	105959583	PRDM1 (-576013), PREP (-107223)
chr8	32918914	32919415	FUT10 (+411775), NRG1 (+513437)
chr3	71550666	71556241	FOXP1 (-373466), EIF4E3 (+221072)
chr12	65549507	65551461	WIF1 (-35138), LEMD3 (-12867)
chr2	26014955	26022324	DTNB (-122137), ASXL2 (+82745)
chr8	122100923	122101424	SNTB1 (-275661), HAS2 (+552456)
chr3	114023033	114030125	TIGIT (+16630), ZBTB20 (+75909)
chr1	211525154	211528889	TRAF5 (+26843), RD3 (+139237)
chr13	61001070	61002873	TDRD3 (+30545)
chr7	90793155	90795995	FZD1 (-99208), CDK14 (+455863)
chr22	44597790	44598291	PARVG (+29205), KIAA1644 (+110690)
chr11	85411610	85412111	CCDC89 (-14541), SYTL2 (+25650)
chr12	105430450	105433891	SLC41A2 (-109738), ALDH1L2 (+46184)
chr4	86623821	86624322	ARHGAP24 (+227805), MAPK10 (+657144)
chr2	12267013	12268605	TRIB2 (-589206), LPIN1 (+450088)
chr10	102065611	102068279	BLOC1S2 (-20476), PKD2L1 (+23298)
chr6	149553685	149555984	TAB2 (-87353), UST (+486371)
chr13	42079881	42080382	RGCC (+48437), VWA8 (+455088)
chr8	29223880	29225318	DUSP4 (-16414), TMEM66 (+716124)
chr1	167414539	167418688	CD247 (+71161), POU2F1 (+226548)
chr4	40237273	40250444	CHRNA9 (-93487), RHOH (+45332)
chrX	13068166	13072858	FAM9C (-7791), ATXN3L (+268006)
chr21	36442384	36447145	RUNX1 (-23124), SETD4 (+987794)
chr20	25070438	25073193	ENTPD6 (-104540), VSX1 (-8820)
chr5	79227603	79236158	MTX3 (+55187), CMYA5 (+246181)
chr10	63994252	63994753	RTKN2 (+33963), ARID5B (+333444)
chr9	37144575	37147653	GRHRP (-276549), ZCCHC7 (+25578)
chr20	50647583	50649524	SALL4 (-229495), ZFP64 (+159971)
chr12	12111144	12111645	BCL2L14 (-112478), ETV6 (+308607)
chr3	101655124	101655973	ZPLD1 (-498310), NFKBIZ (+87191)
chr16	48491610	48493329	SIAH1 (-92658), N4BP1 (+151650)
chr1	79115590	79116240	IFI44 (+399)

chr12	127653587	127654263	NONE
chr3	25502386	25502887	RARB (+32835), TOP2B (+203353)
chr3	141025034	141027838	ZBTB38 (-80218), ACPL2 (+75766)
chr1	192499414	192499915	RGS1 (-45192), RGS21 (+213543)
chr6	149414489	149417552	TAB2 (-226167), UST (+347557)
chr14	71338304	71339812	MAP3K9 (-62807), PCNX (-35064)
chr8	19573194	19579059	CSGALNACT1 (-116121), INTS10 (-98524)
chr10	43794008	43796667	RASGEF1A (-90706), FXYD4 (-71752)
chr12	128139616	128142321	TMEM132C (-610979)
chr8	95176472	95178961	CDH17 (+43098), PDP1 (+248542)
chr15	61011517	61015108	RORA (-93651)
chr7	17571530	17573830	AHR (+234434), SNX13 (+407437)
chr9	78416032	78419995	PCSK5 (-87546), OSTF1 (+714555)
chr1	192127624	192128125	RGS18 (+288)
chr11	131934351	131934852	NTM (+153246), OPCML (+878964)
chr10	8285306	8288680	GATA3 (+190337)
chr9	25710547	25711048	NONE
chr1	86620223	86621494	ZNHIT6 (-446758), COL24A1 (+1587)
chr11	122565176	122572876	CRTAM (-140182), UBASH3B (+42643)
chr10	31026092	31026593	LYZL2 (-107652), ZNF438 (+294523)
chr12	58895803	58896304	LRIG3 (+418249), XRCC6BP1 (+560694)
chr2	196512672	196516809	SLC39A10 (-6730)
chr5	80301838	80305345	CKMT2 (-225551), RASGRF2 (+47101)
chr1	157075195	157075696	ETV3L (-5846), ETV3 (+32713)
chr5	33690367	33692035	ADAMTS12 (+201096), TARS (+250130)
chr16	86618302	86620805	FOXL1 (+7439), FBXO31 (+797809)
chr10	6532283	6538050	PRKCQ (+87096), PFKFB3 (+290273)
chr3	154782910	154783411	GPR149 (-635657), MME (-14275)
chr6	45416613	45417114	SUPT3H (-71194), CLIC5 (+631268)
chr2	113455666	113460554	NT5DC4 (-20953), SLC20A1 (+54676)
chr14	66392553	66396973	GPHN (-579362), FUT8 (+517453)
chr7	150251621	150255945	GIMAP4 (-10582), GIMAP7 (+41865)
chr1	100918875	100919376	GPR88 (-84567), CDC14A (+101079)
chr7	142045248	142045749	PRSS1 (-411831), PRSS58 (-87652)
chr11	104746604	104749060	PDGFD (-712997), CASP12 (+21328)
chr7	17694083	17695883	SNX13 (+285134), AHR (+356737)
chr15	90918636	90922483	IQGAP1 (-10890), ZNF774 (+25083)
chr2	165837611	165838112	SLC38A11 (-25866), SCN3A (+222691)
chr14	98459238	98462765	NONE
chr8	24240544	24245901	ADAM7 (-55316), ADAMDEC1 (+1425)
chrX	123474950	123483691	SH2D1A (-873)
chr9	128283378	128285411	MAPKAP1 (+185118), GAPVD1 (+260284)
chr1	245949696	245951042	KIF26B (+632082), SMYD3 (+720150)
chr19	6640219	6642891	CD70 (-50392), TNFSF14 (+29044)
chr14	51278564	51282023	SAV1 (-145245), NIN (+17545)
chr7	38388410	38405860	STARD3NL (+179311), AMPH (+274032)
chr2	65033985	65035232	SLC1A4 (-181926), SERTAD2 (-153562)
chr3	122328141	122329327	PARP14 (-70731), PARP15 (+32285)
chr6	130504279	130506291	L3MBTL3 (+170441), SAMD3 (+181285)
chr1	198503297	198504999	ATP6V1G3 (+5927), NEK7 (+378055)
chr5	52039857	52040358	ITGA1 (-43622)
chr18	41468254	41469058	SETBP1 (-792207), SYT4 (-611041)
chr5	110558796	110574556	CAMK4 (+6892), STARD4 (+281532)
chr16	56293689	56298363	GNAO1 (+70138), AMFR (+163424)
chr2	172066855	172068571	TLK1 (-50370), METTL8 (+222883)
chr10	4022066	4022567	AKR1E2 (-846129), KLF6 (-194850)



chr18	53455671	53458744	TCF4 (-154023), TXNL1 (+848668)
chr6	33872639	33873140	MLN (-101102), GRM4 (+228553)
chr15	39188201	39188843	THBS1 (-684772), RASGRP1 (-331515)
chr2	179910584	179915140	TTN (-240712), CCDC141 (+1924)
chr4	158971443	158974766	FAM198B (+121097), GRIA2 (+831235)
chr10	63512510	63513011	TMEM26 (-299553), ARID5B (-148298)
chr20	30314941	30315751	BCL2L1 (-4645)
chr1	112048852	112049353	ADORA3 (-2993)
chr2	172179098	172185108	TLK1 (-164760), METTL8 (+108493)
chr21	29836910	29837538	N6AMT1 (+420469)
chr3	111313156	111313657	ZBED2 (+883)
chr1	7995498	8003823	UTS2 (-86170), TNFRSF9 (+1265)
chr12	91742056	91743501	DCN (-165879), BTG1 (+796894)
chr10	52566804	52569360	SGMS1 (-184339), A1CF (+77353)
chr4	1260693	1262289	MAEA (-22148), CTBP1 (-18566)
chr21	27566260	27569201	APP (-24759), CYR1 (+377872)
chr6	22326421	22329936	PRL (-30449)
chr6	26360629	26362388	BTN3A2 (-3950)
chr19	54538025	54540016	VSTM1 (+28186), CACNG6 (+43479)
chr1	117336939	117337440	PTGFRN (-115489), CD2 (+40183)
chr21	32815036	32820831	KRTAP19-8 (-407139), TIAM1 (+113356)
chr13	31347445	31349654	MEDAG (-131778), ALOX5AP (+38905)
chr14	22538330	22540384	OR4E2 (+406060), DAD1 (+518818)
chr20	57694968	57700405	SLMO2 (-79723), ZNF831 (-68388)
chr6	45461561	45465275	SUPT3H (-117748), CLIC5 (+584714)
chr14	76307758	76310189	TGFB3 (+138560), TTL5 (+181353)
chr11	94642044	94645128	CWC15 (+63190), AMOTL1 (+142049)
chr13	94964199	94964700	DCT (+167486)
chr4	114658843	114659344	CAMK2D (+23130), ANK2 (+688262)
chr3	139026423	139028847	COPB2 (+80939), MRPS22 (+302987)
chr10	122182587	122183225	PPAPDC1A (-33560), SEC23IP (+530683)
chr2	144003584	144022067	ARHGAP15 (+125943)
chr7	37353944	37356472	AOAH (-591055), ELMO1 (+133644)
chr17	37972339	37978970	IKZF3 (+44786), GRB7 (+80631)
chr12	47582484	47588729	AMIGO2 (-111959), RPAP3 (+514237)
chr6	81135390	81136228	BCKDHB (+319445)
chr21	46037795	46040003	KRTAP10-9 (-8141), KRTAP10-8 (+6903)
chr6	105998104	106001982	PRDM1 (-534152), PREP (-149084)
chr10	17251622	17252594	VIM (-18150), TRDMT1 (-8427)
chr10	72251902	72256606	PALD1 (+15677), PRF1 (+108277)
chr4	169672033	169674950	PALLD (+255237), CBR4 (+257917)
chr16	73188403	73188904	ZFH3 (-106380)
chr6	75286630	75289960	COL12A1 (+627472), CD109 (+882468)
chr12	91434374	91435032	EPYC (-35900), KERA (+17057)
chr10	72421078	72425900	PRF1 (-60958), ADAMTS14 (-9070)
chr4	6199042	6203092	CRMP1 (-306282), JAKMIP1 (+1215)
chr8	126536962	126541939	TRIB1 (+96888)
chr3	46253765	46256843	CCR3 (-28568), CCR1 (-5417)
chr2	102953422	102953923	IL18R1 (-18716), IL1RL1 (+25711)
chr19	31867898	31870429	ZNF507 (-967336), TSHZ3 (-28711)
chr1	33265477	33265978	SYNC (-97008), S100BPB (-17428)
chr22	28534500	28544558	PITPNB (-224273), TTC28 (+536324)
chr3	136602483	136606781	IL20RB (-72075), NCK1 (+23582)
chr6	38229506	38230257	BTBD9 (+377818), ZFAND3 (+442607)
chr4	1194193	1199050	SPON2 (-29961), CTBP1 (+46303)
chr19	51943246	51945891	SIGLEC10 (-23617), SIGLEC8 (+17139)

chr6	144375663	144377688	PLAGL1 (-86561), SF3B5 (+40078)
chr3	56758047	56761482	CCDC66 (+168564), ARHGFE3 (+353571)
chr6	45583905	45588871	SUPT3H (-240718), CLIC5 (+461744)
chr1	108367665	108374118	VAV3 (+136874), NTNG1 (+687450)
chr6	119116980	119118230	ASF1A (-97779), CEP85L (-86367)
chr1	23926854	23930250	RPL11 (-89717), ID3 (-42267)
chr10	6965816	6972590	PRKCQ (-346940), SFMBT2 (+482100)
chr8	121785049	121794691	SNTB1 (+35643), MTBP (+332204)
chr11	108740812	108742226	C11orf87 (-551327), DDX10 (+205767)
chr20	30314480	30316371	BCL2L1 (-4725)
chr20	51108653	51111657	TSHZ2 (-478791), ZFP64 (-301630)
chr11	118569609	118570110	TREH (-19479), DDX6 (+91985)
chr5	102157611	102160715	SLCO6A1 (-324443), PAM (-42551)
chr6	143220989	143229722	HIVEP2 (+40982), GPR126 (+602290)
chr10	63156529	63158398	RHOBTB1 (-453459), TMEM26 (+55744)
chr7	36774790	36778078	AOAH (-12281), ELMO1 (+712418)
chr14	22855905	22858918	DAD1 (+200763), OR4E2 (+724115)
chr1	246018902	246025413	SMYD3 (+648361), KIF26B (+703871)
chr11	102752050	102754710	MMP3 (-38846), MMP13 (+73083)
chr2	69922085	69922832	AAK1 (-51610), ANXA4 (-46647)
chr14	76181747	76182565	TLL5 (+54535), TGF3 (+265378)
chrX	1671403	1675044	AKAP17A (-37262), P2RY8 (-17224)
chr3	146683396	146692577	PLSCR1 (-425336), ZIC4 (+434084)
chr1	169332609	169333110	BLZF1 (-4348), NME7 (+4345)
chr7	81038840	81039717	SEMA3C (-490612), HGF (+360235)
chr11	15178875	15180281	INSC (+45608)
chr2	189757170	189759529	COL3A1 (-80696), GULP1 (+600791)
chr1	192496634	192500988	RGS1 (-46046), RGS21 (+212689)
chrX	19760952	19772098	MAP3K15 (-233146), SH3KBP1 (+139194)
chr1	185785717	185787328	PRG4 (-478888), HMCN1 (+82840)
chr13	30692708	30693710	UBL3 (-268388), KATNAL1 (+188412)
chr3	125028919	125030773	SLC12A8 (-99603), ZNF148 (+64352)
chr4	13892871	13895087	BOD1L1 (-264632)
chr18	10213099	10214465	APCDD1 (-240843), VAPA (+299723)
chr7	17499904	17509150	AHR (+166281), SNX13 (+475590)
chr17	65444653	65453272	NOL11 (-264986), PIPN1 (+74692)
chr2	191703131	191703784	GLS (-42095), NAB1 (+189499)
chr19	30321172	30324226	URI1 (-110459), CCNE1 (+19894)
chr2	238192615	238193116	COL6A3 (+130152), COPS8 (+198911)
chr5	178913521	178914022	ADAMTS2 (-141341), RUFY1 (-63787)
chr2	216523491	216525240	FN1 (-223471), MREG (+353980)
chr2	189766650	189768519	COL3A1 (-71461), GULP1 (+610026)
chr2	238173454	238174161	COL6A3 (+149210), COPS8 (+179853)
chr13	37767525	37768026	CSNK1A1L (-87973), POSTN (+405205)
chr14	93029280	93030725	RIN3 (+49885), LGMN (+185021)
chr3	99751882	99752759	FILIP1L (+81036), COL8A1 (+395002)
chr5	95481548	95482339	ELL2 (-184169), PCSK1 (+287040)
chr6	37104628	37105945	PIM1 (-32692), COX6A1P2 (+92680)
chr12	92602854	92603959	CLU1 (-214328), BTG1 (-63734)
chr2	200903686	200904187	SPATS2L (-266937), TYW5 (-83478)
chr16	30484117	30484618	ITGAL (+389)
chr7	128580333	128581232	IRF5 (+2789), TNPO3 (+114185)
chr17	30895460	30895961	CDK5R1 (+82074), MYO1D (+308484)
chr20	50476394	50477816	SALL4 (-58046), ZFP64 (+331420)
chr17	46561500	46562205	SKAP1 (-54301), HOXB1 (+46506)
chr2	8226662	8227163	ID2 (-592062)

chr4	156811047	156811959	ASIC5 (-24078), TDO2 (-13344)
chr21	36724851	36726049	RUNX1 (-303809), SETD4 (+707109)
chr2	178294170	178294671	AGPS (+37049), TTC30B (+123321)
chr5	111283166	111285644	STARD4 (-436197), NREP (+28223)
chr6	24951382	24951883	LRRC16A (-328023), FAM65B (-40438)
chr20	1650364	1650865	SIRPA (-225327), SIRPG (-12190)
chr9	15725315	15726023	PSIP1 (-214652)
chr15	39006601	39007234	THBS1 (-866376), RASGRP1 (-149911)
chr1	198466677	198467178	ATP6V1G3 (+43147), NEK7 (+340835)
chr1	246036909	246038402	SMYD3 (+632863), KIF26B (+719369)
chr6	1145629	1146306	EXOC2 (-452857), FOXQ1 (-166707)
chr2	28351757	28352258	FOSL2 (-263717), RBKS (-238043)
chr20	58630773	58631450	CDH26 (+97630)
chr7	113687276	113688827	FOXP2 (-367000), PPP1R3A (-128932)
chr9	78054857	78055358	PCSK5 (-450452), OSTF1 (+351649)
chr2	189591710	189592555	COL3A1 (-246913), GULP1 (+434574)
chr18	33018126	33018627	ZNF396 (-61076), INO80C (+59530)
chr1	192513949	192514450	RGS1 (-30657), RGS21 (+228078)
chr15	51118472	51118973	AP4E1 (-82147), SPPL2A (-60718)
chr7	17701643	17703028	SNX13 (+277781), AHR (+364090)
chr18	6876936	6877842	ARHGAP28 (+42915), LAMA1 (+240424)
chr8	82139216	82139717	PAG1 (-115164), FABP5 (-53131)
chr2	12997082	12997717	TRIB2 (+140385)
chr17	37294389	37296512	PLXDC1 (+12451), LASP1 (+269339)
chr12	109299781	109300282	DAO (+26226), SVOP (+72407)
chr1	198898995	198899657	PTPRC (+291156)
chr2	192501703	192503615	NABP1 (-40599), MYO1B (+392544)
chr6	106606937	106607438	PRDM1 (+72993), ATG5 (+166478)
chr15	55545356	55545857	RSL24D1 (-56342), RAB27A (+16985)
chr5	60614726	60616475	SMIM15 (-157300), ZSWIM6 (-12499)
chr13	38112742	38114065	CSNK1A1L (-433601), POSTN (+59577)
chr2	216525884	216526589	FN1 (-225342), MREG (+352109)
chr6	169433529	169437138	THBS2 (+218805), SMOC2 (+593503)
chr7	65263637	65264138	VKORC1L1 (-74366), ZNF92 (+425176)
chr1	160680726	160681401	CD48 (+577)
chr5	134772309	134776032	H2AFY (-38859), C5orf20 (+8867)
chr4	156559393	156562959	MAP9 (-263054), GUCY1A3 (-27174)
chr2	232107295	232107796	B3GNT7 (-152708), HTR2B (-117714)
chr4	38372690	38373191	KLF3 (-292876), PTTG2 (+410885)
chr10	4169790	4170291	AKR1E2 (-698405), KLF6 (-342574)
chr4	156561547	156562831	MAP9 (-264067), GUCY1A3 (-26161)
chr4	38374477	38375671	KLF3 (-290743), PTTG2 (+413018)
chr9	21575610	21577176	MTAP (-226149), IFNE (-94081)
chr4	13890236	13890737	BOD1L1 (-261140)
chr17	16808493	16808994	ZNF624 (-251577), TNFRSF13B (+66658)
chr4	54727769	54729445	LNX1 (-270824), CHIC2 (+202250)
chr6	149355479	149355980	TAB2 (-286458), UST (+287266)
chrX	1804076	1804577	ASMT (+70433), ZBED1 (+614681)
chr11	13237542	13238746	ARNTL (-61201), TEAD1 (+471556)
chr1	204482545	204483327	MDM4 (-2575)
chr7	142937296	142937943	GSTK1 (-22929), TAS2R40 (+18490)
chr7	94045143	94053161	CASD1 (-89958), COL1A2 (+25279)
chr2	189676180	189677737	COL3A1 (-162087), GULP1 (+519400)
chr20	55639754	55642498	BMP7 (+200558), TFAP2C (+436768)
chr10	5627207	5627834	CALML3 (+60597), ASB13 (+81020)
chr4	146199782	146200964	SMAD1 (-203590), OTUD4 (-99541)

chr2	12842544	12843494	TRIB2 (-13996)
chr14	81236183	81236874	DIO2 (-558686), CEP128 (+171600)
chr7	90676366	90677411	FZD1 (-216894), CDK14 (+338177)
chr20	55449795	55450296	TFAP2C (+245688), BMP7 (+391638)
chr7	17718050	17721657	SNX13 (+260263), AHR (+381608)
chr17	10151770	10152271	GAS7 (-50153), MYH13 (+124426)
chr5	67410709	67411210	CD180 (-918333), PIK3R1 (-100588)
chr11	105052248	105052749	GRIA4 (-428301), CARD18 (-42046)
chr1	116323294	116326069	CASQ2 (-13280), NHLH2 (+61856)
chr2	8442431	8443204	ID2 (-376157)
chr7	89807911	89808412	STEAP2 (-32838), STEAP1 (+24473)
chr5	111016712	111018570	STARD4 (-169433), NREP (+294987)
chr2	189865035	189865668	COL3A1 (+26306), COL5A2 (+179253)
chr14	99521470	99521971	BCL11B (+215844)
chr2	28353184	28353818	FOSL2 (-262224), RBKS (-239536)
chr21	33491711	33492212	MIS18A (+159418), HUNK (+246334)
chr11	128778509	128779505	C11orf45 (-3415)
chr2	121058084	121058724	INHBB (-45315), RALB (+48070)
chr11	48022536	48023037	OR4B1 (-215557), PTPRJ (+20674)
chr2	225276365	225278672	FAM124B (-10768), CUL3 (+172546)
chr2	33754835	33755499	RASGRP3 (+53872)
chr13	95919431	95919932	SOX21 (-555293), ABCC4 (+34001)
chr13	46753519	46754786	CPB2 (-74992), LCP1 (+31330)
chr6	44609465	44609966	RUNX2 (-686390), CDC5L (+254454)
chr18	53790857	53792465	TCF4 (-488476), TXNL1 (+514215)
chr19	42615800	42616301	POU2F2 (+20528), ZNF574 (+41533)
chr9	98823828	98824329	ERCC6L2 (+186096), HSD17B3 (+240355)
chr5	95484831	95486878	ELL2 (-188080), PCSK1 (+283129)
chr21	47971450	47972810	S100B (+52991), DIP2A (+93106)
chr8	8153373	8154217	ENSG00000182319 (+90213), ZNF705B (+352651)
chr4	13908729	13909809	BOD1L1 (-279922)
chr1	245426652	245427153	KIF26B (+108616)
chr6	106034799	106035300	PRDM1 (-499145), PREP (-184091)
chr16	88335245	88340362	ZNF469 (-156075), BANP (+334180)
chr17	29279393	29280168	RNF135 (-17438), ADAP2 (+31083)
chr9	91769683	91770184	SHC3 (+23748), S1PR3 (+158513)
chr18	10239475	10240655	APCDD1 (-214560), VAPA (+326006)
chr9	115624543	115625638	SLC46A2 (+28102), SNX30 (+111973)
chr2	172101553	172102054	TLK1 (-84461), METTL8 (+188792)
chr13	37881128	37881756	CSNK1A1L (-201639), POSTN (+291539)
chr14	75083007	75088249	LTBP2 (-6594), AREL1 (+94190)
chr21	36840543	36841044	RUNX1 (-419153), SETD4 (+591765)
chr12	19777961	19778588	PDE3A (-743904), AEBP2 (+185667)
chr9	129921306	129923613	GARNL3 (-104345), ANGPTL2 (-37298)
chr1	111327801	111331546	KCNA3 (-112019), CD53 (-86102)
chr7	40344584	40345895	C7orf10 (+170665)
chr4	13919091	13919726	BOD1L1 (-290062)
chr12	91615111	91618423	DCN (-39867), BTG1 (+922906)
chr3	48179191	48180035	MAP4 (-48851), CDC25A (+50233)
chr15	38342400	38343413	SPRED1 (-201620), TMC05A (+115449)
chr13	38063423	38066451	CSNK1A1L (-385134), POSTN (+108044)
chr15	65701259	65701896	IGDCC3 (-31200), IGDCC4 (+13832)
chr10	75654013	75654514	CAMK2G (-19921), PLAU (-16651)
chr15	102155728	102156229	PCSK6 (-126106), TM2D3 (+36591)
chr1	32154419	32155578	PEF1 (-44511), COL16A1 (+14921)
chr1	249219704	249220205	ZNF692 (-66896)

chr9	89589171	89589672	DAPK1 (-523374), GAS1 (-27318)
chr1	72122956	72126200	ZRANB2 (-577598), NEGR1 (+623839)
chr13	46745898	46746864	CPB2 (-67220), LCP1 (+39102)
chr2	175700774	175702491	CHRNA1 (-72444), CHN1 (+168321)
chr5	95561956	95563961	ELL2 (-265184), PCSK1 (+206025)
chr13	38017359	38017860	CSNK1A1L (-337807), POSTN (+155371)
chr19	54538636	54539271	VSTM1 (+28253), CACNG6 (+43412)
chr3	55511144	55526179	LRTM1 (-556561), WNT5A (+5311)
chr1	245911068	245917390	KIF26B (+595942), SMYD3 (+756290)
chr6	22328475	22329126	PRL (-31071)
chr12	96438615	96439116	ELK3 (-149294), LTA4H (-9427)
chr10	14048872	14052755	FRMD4A (+322069), PRPF18 (+421887)
chr3	55515028	55516034	LRTM1 (-553430), WNT5A (+8442)
chr2	57669443	57672773	VRK2 (-463678)
chr3	161572673	161573174	OTOL1 (+358328)
chr1	235153771	235155299	IRF2BP2 (-409264), TOMM20 (+137716)
chr1	172348463	172354147	PIGC (+61921), DNM3 (+540684)
chr16	23681795	23682296	PLK1 (-8097), DCTN5 (+29333)
chr13	37936985	37937908	CSNK1A1L (-257644), POSTN (+235534)
chr1	198745731	198746232	PTPRC (+137812)
chr1	54198954	54199455	GLIS1 (+672)
chr9	89023151	89023652	ZCCHC6 (-54075), GAS1 (+538702)
chr13	32785374	32787673	BRCA2 (-103093), FRY (+181087)
chr14	23639983	23641128	CEBPE (-51731), SLC7A8 (+12293)
chr3	160121804	160122305	IFT80 (-4735)
chr3	194286536	194287239	ATP13A3 (-67795), TMEM44 (+67262)
chr2	192500312	192500938	NABP1 (-42633), MYO1B (+390510)
chr2	8226435	8228677	ID2 (-591419)
chr14	52706884	52709097	NID2 (-172279), PTGDR (-26440)
chr8	103794954	103795590	KLF10 (-127142), AZIN1 (+81693)
chr12	118745016	118746246	TAOK3 (+65119), PEBP1 (+171968)
chr17	57826541	57853759	VMP1 (+55324), TUBD1 (+130146)
chr18	43381110	43384367	SIGLEC15 (-22738), SLC14A1 (+76049)
chr6	117769067	117769701	DCBLD1 (-34436), ROS1 (-22366)
chr2	216564861	216565715	FN1 (-264393), MREG (+313058)
chr10	21687711	21688212	NEBL (-501431), SKIDA1 (+126649)
chr20	18686543	18687044	SCP2D1 (-107576), DTD1 (+118257)
chr2	189760358	189766099	COL3A1 (-75817), GULP1 (+605670)
chr13	46913459	46913960	LCP1 (-128227), ESD (+457657)
chr9	137394354	137395068	COL5A1 (-138909), RXRA (+176285)
chr3	146836709	146837456	PLSCR1 (-574432), ZIC4 (+284988)
chr5	102158300	102158934	SLCO6A1 (-323897), PAM (-43097)
chr16	88334875	88342762	ZNF469 (-155060), BANP (+335195)
chr2	132425601	132428239	GPR39 (-747227), MZT2A (-176925)
chr5	111012666	111013389	STARD4 (-164820), NREP (+299600)
chr8	104357388	104358324	CTHRC1 (-25887), FZD6 (+46797)
chr10	5604965	5609495	CALML3 (+40306), ASB13 (+101311)
chr6	106040422	106040923	PRDM1 (-493522), PREP (-189714)
chr10	14051439	14052496	FRMD4A (+320915), PRPF18 (+423041)
chr5	76151662	76152465	CRHBP (-96474), S100Z (+6140)
chr7	80264344	80264845	GNAT3 (-123259), SEMA3C (+284072)
chr9	135521528	135524447	GTF3C4 (-22434), BARHL1 (+65416)
chr6	44634461	44635826	RUNX2 (-660962), CDC5L (+279882)
chr18	46364921	46366009	SMAD7 (+111616), CTIF (+299936)
chr17	69185655	69186156	SOX9 (-931255)
chr15	81384732	81385233	IL16 (-132758), MESDC2 (-102764)

chr8	117434704	117437481	TRPS1 (-754865), EIF3H (+331967)
chr1	153358436	153359094	S100A12 (-10640), S100A8 (+4899)
chr9	118358039	118359800	PAPPA (-557163), DEC1 (+454823)
chr17	46078154	46081443	CDK5RAP3 (+31392), COPZ2 (+35340)
chr8	121789637	121790138	SNTB1 (+35625), MTBP (+332222)
chr7	17505572	17506356	AHR (+167718), SNX13 (+474153)
chr18	46578917	46579418	SMAD7 (-102087), DYM (+408004)
chr5	34051437	34055140	RAI14 (-631370), C1QTNF3 (-9352)
chr15	60095576	60096077	FOXB1 (-200594), BNIP2 (-114094)
chr13	40348377	40353955	COG6 (+121352), FOXO1 (+889568)
chr5	100113371	100114057	ST8SIA4 (+125256), FAM174A (+242705)
chr21	36361237	36362004	RUNX1 (+60020), CLIC6 (+319933)
chr9	446219	446720	KANK1 (-23821), DOCK8 (+231605)
chr13	37783058	37783559	CSNK1A1L (-103506), POSTN (+389672)
chr1	246034109	246040639	SMYD3 (+633145), KIF26B (+719087)
chr12	28569265	28569766	FAR2 (-807082), CCDC91 (+226137)
chr8	49331155	49332879	EFCAB1 (+315774), UBE2V2 (+411057)
chr14	69224160	69225423	ZFP36L1 (+35165), RAD51B (+938267)
chr20	46419238	46421794	SULF2 (-5186)
chr2	235073930	235075399	SPP2 (+115322), ARL4C (+331032)
chr6	1284863	1288538	EXOC2 (-593590), FOXQ1 (-25974)
chr21	35706928	35709671	KCNE2 (-28023), SLC5A3 (+262430)
chr7	40257840	40264912	C7orf10 (+86801)
chr20	5634087	5635336	CHGB (-257364), GPCPD1 (-43040)
chr12	105710670	105711444	APPL2 (-81196), NUAK1 (+822754)
chr1	84155072	84155573	TTLL7 (+309492)
chr6	80934066	80934918	BCKDHB (+118128)
chr2	58266409	58267049	VRK2 (+131943), FANCL (+201756)
chr14	51909933	51910434	FRMD6 (-208481), TMX1 (+203298)
chr6	159797807	159798658	FNDC1 (+207804), SOD2 (+316127)
chr9	93732151	93732652	SYK (+168333), AUH (+391793)
chr4	151200132	151203167	MAB21L2 (-301427), DCLK2 (+201470)
chr5	52005032	52005940	ITGA1 (-78244)
chr3	11571027	11572511	VGLL4 (+113629), ATG7 (+257667)
chr6	22025533	22027727	PRL (+271100), SOX4 (+432658)
chr7	44766904	44767563	ZMIZ2 (-21296), OGDH (+120996)
chr5	135348090	135348752	LECT2 (-57698), TGFBI (-16163)
chr13	50969677	50970178	RNASEH2B (-513886), DLEU1 (+313621)
chr8	124844469	124845768	ANXA13 (-95477), FER1L6 (-19108)
chr5	33787664	33788165	ADAMTS12 (+104382), TARS (+346844)
chr6	44627769	44628555	RUNX2 (-667944), CDC5L (+272900)
chr1	198462213	198462714	ATP6V1G3 (+47611), NEK7 (+336371)
chr9	89590295	89592296	DAPK1 (-521500), GAS1 (-29192)
chr8	49191902	49192403	UBE2V2 (+271193), EFCAB1 (+455638)
chr10	98500791	98501585	LCOR (-91549), PIK3AP1 (-20917)
chr5	167836169	167837126	RARS (-76802), WWC1 (+117493)
chr10	120551575	120552251	NANOS1 (-237315), CACUL1 (-37155)
chr10	128084826	128087080	ADAM12 (-8929), C10orf90 (+124057)
chr6	45644871	45645652	SUPT3H (-299592), CLIC5 (+402870)
chr10	72432415	72432916	ADAMTS14 (+107)
chr2	189852918	189853892	COL3A1 (+14359), COL5A2 (+191200)
chr12	12635550	12636228	MANSC1 (-132414), DUSP16 (+79428)
chr6	125795456	125796171	HEY2 (-274912), HDDC2 (-172532)
chrX	133803400	133803901	PLAC1 (-11138), FAM122B (+126734)
chr7	33809163	33811488	BMPER (-134197), BBS9 (+641182)
chr9	13014203	13014895	MPDZ (+265014), TYRP1 (+321114)

chr14	80680381	80680882	DIO2 (-2789)
chr2	133141590	133142091	MZT2A (-891846), GPR39 (-32306)
chr2	189464266	189465346	COL3A1 (-374240), GULP1 (+307247)
chr1	206997070	206997571	IL20 (-41378), IL19 (+25106)
chr5	71799912	71801824	ZNF366 (+2686), PTC2 (+184674)
chr11	122727012	122728081	CRTAM (+18339), BSX (+124881)
chr4	54553455	54554570	LNK1 (-96230), CHIC2 (+376844)
chr1	222544958	222545459	DUSP10 (-629691), HHIPL2 (+176236)
chr2	163097412	163102671	FAP (+3)
chr11	59952986	59953680	MS4A6A (-2637)
chr20	25298093	25299140	PYGB (+69912), ABHD12 (+73002)
chr3	55223369	55225301	LRTM1 (-262234), WNT5A (+299638)
chr8	134161418	134166823	SLA (-91518), WISP1 (-39161)
chr3	153331423	153333074	ARHGGEF26 (-506543), RAP2B (+452220)
chr1	185941493	185942427	PRG4 (-323451), HMCN1 (+238277)
chr8	133957426	133959646	TG (+79330), SLA (+114067)
chr15	71920197	71923963	SENP8 (-487112), THSD4 (+532789)
chr6	114134761	114135262	MARCKS (-43529)
chr20	46558362	46559255	SULF2 (-143479), PREX1 (+885611)
chr18	56517151	56517652	ZNF532 (-12430), MALT1 (+178784)
chr3	54988354	54989120	LRTM1 (-26636), WNT5A (+535236)
chr21	36358330	36358831	RUNX1 (+63060), CLIC6 (+316893)
chr2	189754527	189770371	COL3A1 (-76597), GULP1 (+604890)
chr12	92963663	92964164	PLEKHG7 (-166397), CLLU1 (+146179)
chr22	27528470	27531684	CRYBA4 (+512149), MN1 (+667409)
chr6	125698185	125699202	HEY2 (-372032), HDDC2 (-75412)
chr11	10612770	10615412	LYVE1 (-23853), MRV1 (+101208)
chr9	117314383	117314884	DFNB31 (-47384), ATP6V1G1 (-35392)
chr4	54726989	54730288	LNK1 (-270856), CHIC2 (+202218)
chr2	216527553	216528982	FN1 (-227373), MREG (+350078)
chr20	46555639	46556140	SULF2 (-140560), PREX1 (+888530)
chr21	36535776	36536277	RUNX1 (-114386), SETD4 (+896532)
chr9	92098822	92099323	GADD45G (-120855), SEMA4D (-65325)
chr1	198462017	198471065	ATP6V1G3 (+43534), NEK7 (+340448)
chr7	113686203	113689790	FOXP2 (-367055), PPP1R3A (-128877)
chr12	116818861	116821143	MAP1LC3B2 (-177184), MED13L (-104859)
chr17	60866965	60870303	MARCH10 (+17061), MRC2 (+163872)
chr13	38015989	38027891	CSNK1A1L (-342137), POSTN (+151041)
chr1	165823055	165823911	POGK (-985843), UCK2 (+26715)
chr12	22840130	22840758	ETNK1 (+62435)
chr12	96437667	96443263	ELK3 (-147695), LTA4H (-11026)
chr2	163112487	163112988	FAP (-12693), IFIH1 (+62475)
chr7	38389055	38390574	STARD3NL (+171991), AMPH (+281352)
chr2	189489146	189489973	COL3A1 (-349486), GULP1 (+332001)
chr18	54231977	54232478	TCF4 (-929043), TXNL1 (+73648)
chr5	95555631	95556132	ELL2 (-258107), PCSK1 (+213102)
chr6	45622123	45630467	SUPT3H (-280625), CLIC5 (+421837)
chr7	17621452	17622294	AHR (+283627), SNX13 (+358244)
chr6	6362959	6363460	LY86 (-225131), F13A1 (-42143)
chr5	33650474	33651109	TARS (+209721), ADAMTS12 (+241505)
chr9	21549041	21564291	MTAP (-245876), IFNE (-74354)
chr6	65229626	65230127	PHF3 (+884136)
chr18	56605469	56605970	SEC11C (-200989), ZNF532 (+75888)
chr2	189440477	189442752	COL3A1 (-397431), GULP1 (+284056)
chr14	81235805	81239376	DIO2 (-559748), CEP128 (+170538)
chr8	105373054	105374451	DCSTAMP (+21699), DPYS (+105528)

chr18	43381716	43382937	SIGLEC15 (-23150), SLC14A1 (+75637)
chr18	6627816	6629143	L3MBTL4 (-213570), ARHGAP28 (-205994)
chr4	187853199	187853849	FAT1 (-208515)
chr1	18201383	18201884	IGSF21 (-232606), ACTL8 (+119826)
chr6	21954299	21954981	PRL (+343090), SOX4 (+360668)
chr1	110852010	110852511	RBM15 (-28867), KCNC4 (+98166)
chr10	73132203	73132704	SLC29A3 (+53439), C10orf105 (+347124)
chr14	20895956	20896913	TEP1 (-14855), OSGEP (+26829)
chr10	127916139	127916640	ADAM12 (+160634), FANK1 (+331282)
chr11	20118142	20119462	DBX1 (+63068), NAV2 (+383659)
chr6	166672040	166672541	T (-90184), SFT2D1 (+83788)
chr2	158102463	158104137	GALNT5 (-10810), GPD2 (+811347)
chr6	25403333	25408720	SCGN (-246437), LRRC16A (+126371)
chr19	17633631	17634882	FAM129C (+147)
chr20	7674787	7675483	HAO1 (+245986), BMP2 (+926824)
chr13	101528283	101528936	TMTC4 (-201561), NALCN (+540096)
chr15	58686475	58691075	LIPC (-13993), AQP9 (+258380)
chr14	85937931	85938432	FLRT2 (-58306)
chr1	120229591	120230092	ZNF697 (-39446), PHGDH (-24668)
chr1	172246766	172248762	PIGC (+165462), DNMT3 (+437143)
chr6	122334481	122334982	HSF2 (-385959), GJA1 (+577894)
chr10	16870425	16871294	RSU1 (-11478), CUBN (+300970)
chr6	143496899	143498170	AIG1 (+115522), ADAT2 (+274275)
chr13	37960076	37960577	CSNK1A1L (-280524), POSTN (+212654)
chr2	28310132	28310633	FOSL2 (-305342), RBKS (-196418)
chr9	110810602	110811291	KLF4 (-559020), ACTL7B (+808292)
chr21	36561736	36562615	RUNX1 (-140535), SETD4 (+870383)
chr1	116322923	116326671	CASQ2 (-13395), NHLH2 (+61741)
chr1	76719409	76719910	ST6GALNAC5 (-613466), ST6GALNAC3 (+179256)
chr4	122705602	122706103	TMEM155 (-19513), EXOSC9 (-16622)
chr3	62051355	62051856	FEZF2 (+307584), PTPRG (+504021)
chr17	60972771	60973272	TANC2 (-113895), MARCH10 (-87327)
chr2	102011815	102013750	CREG2 (-8726), RFX8 (+78382)
chr5	54196549	54197518	ESM1 (+84457), SNX18 (+383441)
chr6	47451913	47452414	GPR111 (-172059), CD2AP (+6639)
chr9	16963848	16964349	CNTLN (-170881), BNC2 (-93395)
chr9	89723727	89724733	DAPK1 (-388566), GAS1 (-162126)
chr10	31434783	31437061	ZEB1 (-172179), ZNF438 (-115056)
chr8	104359070	104361830	CTHRC1 (-23293), FZD6 (+49391)
chr11	131942315	131942965	NTM (+161284), OPCML (+870926)
chr6	17993088	17993589	KIF13A (-5539), NHLRC1 (+129512)
chr18	10373465	10382570	APCDD1 (-76607), VAPA (+463959)
chr7	17646859	17649619	AHR (+309993), SNX13 (+331878)
chr20	46520827	46521328	SULF2 (-105748), PREX1 (+923342)
chr14	104859756	104860257	C14orf180 (-186014), C14orf144 (+149466)
chr2	201036622	201037272	TYW5 (-216488), SPATS2L (-133927)
chr13	38100358	38102540	CSNK1A1L (-421646), POSTN (+71532)
chr2	216521830	216530931	FN1 (-225486), MREG (+351965)
chr3	59752482	59753113	NONE
chr18	8744585	8745335	NDUFV2 (-357668), SOGA2 (+27591)
chr18	20670881	20671382	CABLES1 (-44595), RBBP8 (+157343)
chr18	8944257	8946138	NDUFV2 (-157430), SOGA2 (+227829)
chr5	118022291	118025315	TNFAIP8 (-666206)
chr8	70544809	70545310	SULF1 (+166201), SLC05A1 (+202239)
chr13	37700898	37703969	CSNK1A1L (-22631), POSTN (+470547)
chr2	207095262	207095969	ZDBF2 (-43771), GPR1 (-12868)



chr2	102716773	102717274	IL1R1 (-42222), IL1R2 (+108718)
chr20	11188350	11189017	JAG1 (-533990)
chr14	53628933	53629434	DDHD1 (-9368), BMP4 (+794345)
chr6	122115408	122116138	HSF2 (-604918), GJA1 (+358935)
chr12	106051377	106054853	APPL2 (-423254), NUAK1 (+480696)
chr16	55598122	55598623	CAPNS2 (-2211)
chr12	127654773	127655274	NONE
chr21	36933736	36938779	RUNX1 (-514617), SETD4 (+496301)
chr18	8960037	8962493	NDUFV2 (-141363), SOGA2 (+243896)
chr5	174224803	174226441	MSX2 (+74086), DRD1 (+645589)
chr9	26169785	26170286	CAAP1 (+722766)
chr15	39542764	39544006	RASGRP1 (-686378), THBS1 (-329909)
chr3	146687296	146689220	PLSCR1 (-425607), ZIC4 (+433813)
chr12	12110781	12112938	BCL2L14 (-112013), ETV6 (+309072)
chr9	137435466	137439226	COL5A1 (-96274), RXRA (+218920)
chr10	128109375	128110140	ADAM12 (-32734), C10orf90 (+100252)
chr8	49814862	49817402	EFCAB1 (-168341), SNAI2 (+18167)
chr14	76081208	76081709	FLVCR2 (+36499), C14orf1 (+46073)
chr10	52761033	52761534	A1CF (-115849), PRKG1 (-72650)
chr2	74795390	74795891	DOK1 (+14428), M1AP (+79523)
chr9	94308081	94310144	NFIL3 (-122969), ROR2 (+403331)
chr20	46465291	46466011	SULF2 (-50321), PREX1 (+978769)
chr17	42611306	42611969	GPATCH8 (-30869), FZD2 (-23287)
chr7	92532365	92535225	CDK6 (-70564), SAMD9 (+213541)
chr3	141055511	141056012	ZBTB38 (-50892), ACPL2 (+105092)
chr7	17698688	17701008	SNX13 (+280269), AHR (+361602)
chr13	38057702	38062599	CSNK1A1L (-380348), POSTN (+112830)
chr20	22885623	22886124	FOXA2 (-320773), SSTR4 (-130183)
chr1	205270555	205271345	NUAK2 (+19933), TMCC2 (+73646)
chr5	114918685	114919889	FEM1C (-38696), TMED7-TICAM2 (+42571)
chr8	104197059	104197839	FZD6 (-113610), BAALC (+44511)
chr5	167231309	167231810	WWC1 (-487595), TENM2 (+519756)
chr20	46644927	46646418	SULF2 (-230343), PREX1 (+798747)
chr7	121384728	121385369	FAM3C (-348661), PTPRZ1 (-128094)
chr17	57843480	57846396	VMP1 (+60112), TUBD1 (+125358)
chr18	10297205	10308060	APCDD1 (-151992), VAPA (+388574)
chr2	234939410	234942589	SPP2 (-18343), TRPM8 (+114957)
chr5	178803914	178807478	RUFY1 (-171863), ADAMTS2 (-33265)
chr15	59268256	59268757	SLTM (-42655), RNF111 (-11644)
chr1	158789685	158790186	OR6N2 (-42511), MNDA (-11171)
chr2	235154126	235155622	SPP2 (+195531), ARL4C (+250823)
chr6	122336946	122337447	HSF2 (-383494), GJA1 (+580359)
chr11	131630527	131631028	SNX19 (-844374), NTM (-150578)
chr2	97063346	97063847	ARID5A (-138889), NCAPH (+62072)
chr22	23128916	23136144	IGLL5 (-97430), GGTL2 (+143714)
chr5	111280726	111287438	STARD4 (-435874), NREP (+28546)
chr2	189532514	189534776	COL3A1 (-305401), GULP1 (+376086)
chr21	36584508	36585175	RUNX1 (-163201), SETD4 (+847717)
chr3	106935872	106936373	BBX (-305700)
chr15	39005821	39008449	THBS1 (-866159), RASGRP1 (-150128)
chr16	9165845	9167844	USP7 (-109504)
chr9	117038330	117039022	ORM1 (-46660), COL27A1 (+120836)
chr2	177284106	177284607	HNRNPA3 (-792934), MTX2 (+150210)
chr18	33888756	33891022	FHOD3 (+12212), TPGS2 (+519269)
chr13	95919208	95921630	SOX21 (-556030), ABCC4 (+33264)
chr14	76296569	76300362	TGFB3 (+149068), TTLL5 (+170845)

chr10	98018098	98018599	BLNK (+12948), CCNJ (+215009)
chr6	75982257	75983128	COX7A2 (-22654), TMEM30A (+11991)
chr15	89609527	89614830	MFGE8 (-155537), ABHD2 (-19202)
chr17	29281410	29282254	RNF135 (-15387), ADAP2 (+33134)
chr13	37737090	37737591	CSNK1A1L (-57538), POSTN (+435640)
chr1	172352055	172352739	PIGC (+60829), DNM3 (+541776)
chr1	94781131	94781632	ABCD3 (-102629), ARHGAP29 (-78261)
chr16	75336123	75336624	BCAR1 (-36469), CFDP1 (+131009)
chr2	237676303	237679959	COPS8 (-315824), ACKR3 (+199847)
chr9	92445425	92446207	GADD45G (+225888), DIRAS2 (+959570)
chr22	28536959	28537627	PITPNB (-222037), TTC28 (+538560)
chr13	42187143	42190291	RGCC (+157022), VWA8 (+346503)
chr13	44404321	44405013	ENOX1 (-43623), SMIM2 (+330726)
chr12	91643816	91646331	DCN (-68174), BTG1 (+894599)
chr3	114050661	114051499	TIGIT (+41131), ZBTB20 (+51408)
chr5	56834595	56835286	ACTBL2 (-56305), PLK2 (+921146)
chr2	47417135	47417636	EPCAM (-178901), CALM2 (-13646)
chr4	141639848	141640539	UCP1 (-150235), TBC1D9 (+37080)
chr3	45145751	45148852	CDCP1 (+40612), CLEC3B (+79627)
chr16	65579692	65583895	CDH5 (-818739), CDH11 (-425693)
chr13	37742464	37752736	CSNK1A1L (-67797), POSTN (+425381)
chr4	13908228	13910750	BOD1L1 (-280142)
chr8	103379685	103381394	RRM2B (-129194), UBR5 (+44529)
chr5	42983805	42986970	SEPP1 (-173207), ZNF131 (-136312)
chr11	71655546	71656513	IL18BP (-54079), RNF121 (+16283)
chr13	38053352	38069734	CSNK1A1L (-381740), POSTN (+111438)
chr7	68739655	68743641	AUTS2 (-322671)
chr8	95111440	95114880	CDH17 (+107655), PDP1 (+183985)
chr17	20110363	20110864	SPECC1 (+120279), LGALS9B (+260234)
chr16	73186939	73187626	ZFH3 (-105009)
chr10	63022808	63023309	RHOBTB1 (-319054), TMEM26 (+190149)
chr2	189748006	189749093	COL3A1 (-90496), GULP1 (+590991)
chr4	156523312	156524710	MAP9 (-225889), GUCY1A3 (-64339)
chr6	22236710	22237591	PRL (+60579), SOX4 (+643179)
chr16	53699484	53700110	AKTIP (-162634), RPGRIP1L (+37961)
chr6	119941579	119943338	MAN1A1 (-271533)
chrX	133683067	133685735	HPRT1 (+90218), PLAC1 (+108112)
chr1	198743665	198748236	PTPRC (+137781)
chr12	67774766	67777347	DYRK2 (-266444), CAND1 (+112996)
chr1	153362961	153363462	S100A8 (+452)
chr13	32784859	32788429	BRCA2 (-102973), FRY (+181207)
chr15	32979168	32979669	GREM1 (-30756), SCG5 (+45542)
chr13	38054970	38055637	CSNK1A1L (-375501), POSTN (+117677)
chr3	154796464	154798329	MME (-39)
chr13	38056179	38056680	CSNK1A1L (-376627), POSTN (+116551)
chr9	137705532	137706535	FCN2 (-66624), COL5A1 (+172414)
chr1	98366890	98367535	DPYD (+19366)
chr2	235149888	235150660	SPP2 (+190931), ARL4C (+255423)
chr12	89176203	89176704	KITLG (-202216), DUSP6 (+570594)
chr18	53789595	53793233	TCF4 (-488229), TXNL1 (+514462)
chr21	36721121	36727808	RUNX1 (-302824), SETD4 (+708094)
chr10	33522009	33522926	ITGB1 (-275646), NRP1 (+102722)
chr6	56776347	56777957	DST (-269358), KIAA1586 (-134195)
chr9	117967356	117969940	PAPPA (-947435), DEC1 (+64551)
chr12	91757710	91758211	DCN (-181061), BTG1 (+781712)
chr1	246164937	246165438	SMYD3 (+505331), KIF26B (+846901)

chr17	46558623	46565762	SKAP1 (-54641), HOXB1 (+46166)
chr8	134027929	134030278	SLA (+43499), TG (+149898)
chr5	178803841	178805854	RUFY1 (-172711), ADAMTS2 (-32417)
chr4	77674420	77676497	SEPT11 (-195397), SHROOM3 (+319206)
chr2	189438169	189439453	COL3A1 (-400235), GULP1 (+281252)
chr14	56800026	56801184	TMEM260 (-245906), PELI2 (+215512)
chr7	41460663	41461499	INHBA (+281625)
chr9	118789965	118790610	PAPPA (-125795), DEC1 (+886191)
chr1	66954038	66962433	SGIP1 (-41729), PDE4B (+700039)
chr6	119941773	119942274	MAN1A1 (-271098)
chr4	169542882	169544028	PALLD (+125200), CBR4 (+387954)
chr18	10039980	10040990	APCDD1 (-414140), VAPA (+126426)
chr12	118743976	118746789	TAOK3 (+65367), PEBP1 (+171720)
chr3	25551185	25551686	RARB (+81634), TOP2B (+154554)
chr6	114133370	114135993	MARCKS (-43859)
chr2	201036161	201038983	TYW5 (-217113), SPATS2L (-133302)
chr2	216529740	216530241	FN1 (-229096), MREG (+348355)
chr6	147360502	147361136	STXBP5 (-164850), ADGB (+440718)
chr2	192266279	192266780	NABP1 (-276728), MYO1B (+156415)
chr2	28303135	28304896	FOSL2 (-311709), RBKS (-190051)
chr8	95176601	95178433	CDH17 (+43298), PDP1 (+248342)
chr17	8826124	8826625	PIK3R6 (-55381), PIK3R5 (+42649)
chr8	37273595	37274096	ZNF703 (-279423), KCNU1 (+631954)
chr11	106268993	106269849	AASDHPPT (+321205), GUCY1A2 (+619750)
chr1	79026820	79027321	IFI44L (-59017), PTGFR (+70314)
chr6	149884257	149884884	GINM1 (-2859)
chr2	238005870	238006502	COPS8 (+12231), COL6A3 (+316832)
chr1	77836120	77836621	AK5 (+88635), ZZZ3 (+311972)
chr11	131941297	131941798	NTM (+160192), OPCML (+872018)
chr14	59281650	59282151	DAAM1 (-448272), DACT1 (+177004)
chr7	139530373	139530874	TBXAS1 (+1672), PARP12 (+232897)
chr9	78056152	78057619	PCSK5 (-448674), OSTF1 (+353427)
chr8	105372069	105375062	DCSTAMP (+21512), DPYS (+105715)
chr5	41795041	41795542	PLCXD3 (-284589), OXCT1 (+75329)
chr18	18743105	18744274	GREB1L (-199864), ROCK1 (-51878)
chr6	22364260	22364761	PRL (-66781)
chr3	99427570	99428384	COL8A1 (+70658), FILIP1L (+405380)
chr11	13236247	13239360	ARNTL (-61541), TEAD1 (+471216)
chr10	80477727	80478228	ZMIZ1 (-350814), RPS24 (+684460)
chr5	169230418	169231176	FOXI1 (-302104), DOCK2 (+166546)
chr10	72452707	72456116	ADAMTS14 (+21853), TBATA (+90745)
chr14	73109305	73111027	DPF3 (+250643), RGS6 (+711010)
chr2	225746389	225747066	CUL3 (-296663), DOCK10 (+160431)
chr11	105050950	105054706	GRIA4 (-427972), CARD18 (-42375)
chr5	167125658	167126472	WWC1 (-593090), TENM2 (+414261)
chr5	178733446	178734466	ADAMTS2 (+38475), ZNF354C (+246540)
chr12	12540285	12540786	MANSC1 (-37061), DUSP16 (+174781)
chr18	56467242	56468960	ZNF532 (-61731), MALT1 (+129483)
chr12	27329236	27334780	STK38L (-65100), MED21 (+156525)
chr6	37682060	37682561	ZFAND3 (-104964), MDGA1 (-16545)
chr2	238031538	238032039	COPS8 (+37834), COL6A3 (+291229)
chr10	76802253	76802754	DUPD1 (+15768), KAT6B (+216121)
chr2	200992139	200992640	SPATS2L (-178484), TYW5 (-171931)
chr1	15585845	15586476	EFHD2 (-150230), TMEM51 (+107133)
chr8	132826107	132830813	ADCY8 (-773788), EFR3A (-87875)
chr8	86853729	86856299	REXO1L10P (-96269), PSKH2 (+226912)

chr1	200148782	200149435	NR5A2 (+152379), ZNF281 (+230075)
chr6	155253072	155255197	CLDN20 (-331012), TIAM2 (+100304)
chr1	198463358	198464315	ATP6V1G3 (+46238), NEK7 (+337744)
chr10	20914088	20914589	NEBL (+272192), PLXDC2 (+809171)
chr15	33131115	33131616	GREM1 (+121191), FMN1 (+228719)
chr5	6228238	6228872	MED10 (+150152)
chr6	170714733	170715415	FAM120B (+99230), PSMB1 (+147355)
chr8	95111119	95116972	CDH17 (+106769), PDP1 (+184871)
chr7	40854630	40855131	C7orf10 (+680306), INHBA (+887825)
chr17	60690891	60691392	MRC2 (-13620), TLK2 (+134756)
chr3	48178680	48180051	MAP4 (-48604), CDC25A (+50480)
chr3	153330667	153334051	ARHGEF26 (-506433), RAP2B (+452330)
chr6	11609111	11609753	TMEM170B (+70921), ADTRP (+169604)
chr20	46520730	46521672	SULF2 (-105871), PREX1 (+923219)
chr3	66353216	66354023	LRIG1 (+197736), SLC25A26 (+234335)
chr18	11246243	11246931	GNAL (-442368), PIEZO2 (-98000)
chr6	22366880	22367513	PRL (-69467)
chr2	98950194	98950956	TMEM131 (-338221), CNGA3 (-12043)
chrX	45337840	45339157	KRBOX4 (-967793), CXorf36 (-278353)
chr3	62571178	62574416	FEZF2 (-213607), CADPS (+288257)
chr14	103827566	103829194	MARK3 (-23477), EIF5 (+28041)
chr17	60901884	60902385	TANC2 (-184782), MARCH10 (-16440)
chr18	52804510	52809810	RAB27B (+311730), TCF4 (+496025)
chr17	41811231	41811732	MEOX1 (-72160), SOST (+24674)
chr5	14574437	14575097	FAM105B (-90090), TRIO (+430956)
chr18	52806274	52807379	RAB27B (+311397), TCF4 (+496358)
chr12	66661211	66663961	HELB (-33739), IRAK3 (+79927)
chr18	33895313	33895965	FHOD3 (+17962), TPGS2 (+513519)
chr1	170587150	170590286	PRRX1 (-44329), GORAB (+87448)
chr21	36952679	36954099	RUNX1 (-531748), SETD4 (+479170)
chr12	47308159	47308660	PCED1B (-164976), SLC38A4 (-88630)
chr4	159043336	159044017	FAM198B (+50525), GRIA2 (+901807)
chr2	208258706	208260756	KLF7 (-229062), CREB1 (-134885)
chr8	49814457	49818157	EFCAB1 (-168516), SNAI2 (+17992)
chr13	111684375	111685005	ARHGEF7 (-82934), ING1 (+317361)
chr15	39539841	39541331	RASGRP1 (-683579), THBS1 (-332708)
chr15	51496554	51497055	CYP19A1 (+134002), AP4E1 (+295935)
chr10	33653569	33655988	NRP1 (-29589)
chr21	36721010	36724347	RUNX1 (-301038), SETD4 (+709880)
chr10	61321536	61322037	SLC16A9 (+148050), PHYHIPL (+385437)
chr3	154959073	154959574	MME (+161888), PLCH1 (+434504)
chr6	137959646	137960147	TNFAIP3 (-228684), OLIG3 (-144366)
chr15	71919038	71929263	SENP8 (-485041), THSD4 (+534860)
chr12	7651931	7652704	CD163L1 (-55537), CD163 (+4171)
chr3	8663815	8664640	SSUH2 (+22256), LMCD1 (+120835)
chr2	102715395	102718897	IL1R1 (-42100), IL1R2 (+108840)
chr11	86226317	86227839	ME3 (+156600), C11orf73 (+213813)
chr6	113769163	113771387	MARCKS (-408266)
chr9	21579256	21579757	MTAP (-223035), IFNE (-97195)
chr15	58809495	58810227	LIPC (+107093), ADAM10 (+232316)
chr1	59391639	59400450	FGGY (-366608), JUN (-146260)
chr15	56201537	56202038	PRTG (-166611), NEDD4 (+7541)
chr8	104240934	104243306	FZD6 (-68939), BAALC (+89182)
chr2	175698486	175703300	CHRNA1 (-71704), CHN1 (+169061)
chr5	150858563	150864769	SLC36A1 (+34509), FAT2 (+86839)
chr12	7708836	7709337	CD163 (-52598), APOBEC1 (+109402)

chr2	201089984	201090485	TYW5 (-269776), SPATS2L (-80639)
chr15	63542796	63543436	APH1B (-26637), RAB8B (+61448)
chr20	55606310	55606811	BMP7 (+235123), TFAP2C (+402203)
chr5	92544633	92545559	NR2F1 (-373947)
chr3	194918387	194919086	LSG1 (-525531), XXYL1 (+73159)
chr6	119948160	119949977	MAN1A1 (-278143)
chr17	10459523	10460316	MYH2 (-6646), MYH3 (+100706)
chr13	47911945	47912446	HTR2A (-442023), SUCLA2 (+663266)
chr3	194285862	194288019	ATP13A3 (-67848), TMEM44 (+67209)
chr9	137713825	137714326	FCN2 (-58582), COL5A1 (+180456)
chr2	192301384	192302486	NABP1 (-241323), MYO1B (+191820)
chr2	114518497	114520990	ACTR3 (-127793), SLC35F5 (-5344)
chr1	200336629	200338021	ZNF281 (+41859), NR5A2 (+340595)
chr7	41136199	41138863	INHBA (+605175), C7orf10 (+962956)
chr13	37738307	37739633	CSNK1A1L (-59167), POSTN (+434011)
chr5	142001126	142001627	FGF1 (-470)
chr6	45591713	45594959	SUPT3H (-247666), CLIC5 (+454796)
chr14	35119020	35120077	SNX6 (-20160), CFL2 (+63485)
chr2	176794395	176794896	ATP5G3 (-745311), HOXD10 (-186661), HOXD11 (-177368), HOXD12 (-169812), HOXD13 (-162973), KIAA1715 (+72427), EVX2 (+153995)
chr14	85526099	85526600	FLRT2 (-470138)
chr8	119269320	119269821	EXT1 (-145479), TNFRSF11B (+694868)
chr2	38923614	38924115	GALM (+30813), SRSF7 (+54771)
chr8	82408410	82414323	FABP4 (-15869), FABP12 (+32246)
chr16	65579209	65584032	CDH5 (-818912), CDH11 (-425520)
chr5	33649033	33651641	TARS (+209266), ADAMTS12 (+241960)
chr7	2748476	2751528	AMZ1 (+30846), GNA12 (+133956)
chr7	50677913	50678414	DDC (-45010), GRB10 (+121886)
chr15	62149285	62149955	C2CD4A (-209556)
chr4	25332446	25333927	ANAPC4 (-45648), ZCCHC4 (+18779)
chr5	142601783	142602720	NR3C1 (+181002), ARHGAP26 (+452303)
chr12	12532307	12533211	MANSC1 (-29284), DUSP16 (+182558)
chr9	131999701	132000202	NTMT1 (-371211), PPP2R4 (+126355)
chr20	57740572	57741208	SLMO2 (-122926), ZNF831 (-25185)
chr6	16436888	16437541	GMPR (+198404), ATXN1 (+324472)
chr20	35559631	35560132	SOGA1 (-67793), SAMHD1 (+20364)
chr22	50799519	50800218	PPP6R2 (+18117), SBF1 (+113584)
chr19	47434243	47442942	NPAS1 (-84484), ARHGAP35 (+16660)
chr22	25461665	25469259	CRYBB3 (-130355), TMEM211 (-122800)
chr9	123654329	123654830	PHF19 (-14974), TRAF1 (+36467)
chr12	6551875	6558495	TAPBPL (-6065), CD27 (+1152)
chr12	105431097	105431787	SLC41A2 (-109009), ALDH1L2 (+46913)
chr9	136563738	136569315	SARDH (+38515), DBH (+65045)
chr3	177144529	177145159	TBL1XR1 (-230578)
chr16	82685429	82685930	CDH13 (+25110)
chr1	117352773	117353814	PTGFRN (-99385), CD2 (+56287)
chr8	126660265	126661488	TRIB1 (+218314), FAM84B (+909761)
chrX	1585235	1591846	ASMTL (-16775), P2RY8 (+67459)
chr11	78174949	78178247	GAB2 (-47746), NARS2 (+109311)
chr7	44931253	44931931	PURB (-6632), MYO1G (+87105)
chr14	102285292	102285793	DYNC1H1 (-145322), PPP2R5C (+57408)
chr3	27680363	27682052	SLC4A7 (-182963), EOMES (+82781)
chr16	80689801	80691838	DYNLRB2 (+115966), CDYL2 (+147406)
chr9	136542882	136543743	DBH (+41831), SARDH (+61729)
chr14	22988957	22991169	DAD1 (+68112), OR4E2 (+856766)
chr10	115719515	115721019	DCLRE1A (-106408), ADRB1 (-83539)

chr4	40300256	40314920	CHRNA9 (-29758), RHOH (+109061)
chr2	202116804	202117305	CASP8 (-5704), CASP10 (+69451)
chr7	105445016	105451645	EFCAB10 (-226388), CDHR3 (-155354)
chr1	53873161	53882368	LRP8 (-84079), DMRTB1 (-47307)
chr10	3798399	3798900	PITRM1 (-583647), KLF6 (+28817)
chr1	86853842	86857120	COL24A1 (-233035), ODF2L (+6464)
chr5	130589875	130590376	CDC42SE2 (-9667), LYRM7 (+83623)
chr21	32556469	32556970	KRTAP19-8 (-145925), TIAM1 (+374570)
chrX	70838060	70838561	CXCR3 (+49)
chr11	72230273	72232151	CLPB (-85520), PDE2A (+154285)
chr16	80690240	80690741	DYNLRB2 (+115637), CDYL2 (+147735)
chr6	74180645	74181146	MTO1 (+9595), EEF1A1 (+49845)
chr22	48492286	48495682	FAM19A5 (-391288)
chr14	22992853	22993354	DAD1 (+65071), OR4E2 (+859807)
chr9	136566201	136568675	SARDH (+37604), DBH (+65956)
chr1	101414591	101417104	SLC30A7 (+54216), DPH5 (+75480)
chr6	131601702	131604222	ARG1 (-291403), AKAP7 (+146156)
chr22	47009079	47009747	CELSR1 (-76346), GRAMD4 (-6886)
chr8	101506083	101507823	RNF19A (-191466), ANKRD46 (+65017)
chr2	235397333	235399252	ARL4C (+7404), SPP2 (+438950)
chr6	119635111	119636053	FAM184A (-235674), MAN1A1 (+35344)
chr9	136540408	136544499	DBH (+40972), SARDH (+62588)
chr4	40244627	40245128	CHRNA9 (-92468), RHOH (+46351)
chr14	23000536	23002649	DAD1 (+56582), OR4E2 (+868296)
chr6	152502544	152509757	SYNE1 (+452383), ESR1 (+494520)
chr20	57738269	57739512	SLMO2 (-120927), ZNF831 (-27184)
chr7	35768562	35769063	SEPT7 (-71814), HERPUD2 (-34068)
chr21	35306739	35307240	MRPS6 (-138833), ATP5O (-18706)
chr14	22994167	22994668	DAD1 (+63757), OR4E2 (+861121)
chr14	91868623	91869580	GPR68 (-148833), CCDC88C (+15019)
chr5	156621118	156621768	CYFIP2 (-71695), ITK (+13606)
chr5	65015021	65015522	NLN (-2751)
chr12	6532643	6538261	CD27 (-18581), LTBR (+42253)
chr1	160396593	160403694	VANGL2 (+29768), SLAMF6 (+92899)
chr1	150077080	150085546	PLEKHO1 (-40857), VPS45 (+41944)
chr15	22547432	22558028	TUBGCP5 (-280665), OR4N4 (+170348)
chr14	22978080	22979642	DAD1 (+79314), OR4E2 (+845564)
chr1	160398669	160400247	VANGL2 (+29082), SLAMF6 (+93585)
chr16	84580983	84589583	TLDC1 (-46919), COTL1 (+66400)
chr12	47785242	47786379	AMIGO2 (-312163), RPAP3 (+314033)
chr15	38958846	38967781	THBS1 (-909980), RASGRP1 (-106307)
chr6	31765562	31766063	VARS (-2083)
chr18	43245932	43246433	SLC14A1 (-60507), SLC14A2 (+51417)
chr16	82689319	82689820	CDH13 (+29000)
chr4	40190281	40236501	CHRNA9 (-123955), RHOH (+14864)
chr19	34840730	34841231	GPI (-14664), LSM14A (+177510)
chrX	70839769	70840270	CXCR3 (-1660)
chr22	40720101	40720802	ADSL (-22055), TNRC6B (+146523)
chr18	13376829	13378206	LDLRAD4 (+158732), FAM210A (+349041)
chr17	46502910	46508324	SKAP1 (+1935), SNX11 (+320697)
chrX	70835285	70845259	CXCR3 (-1912)
chr20	48286296	48286797	PTGIS (-101864), B4GALT5 (+43868)
chr6	74131890	74132391	DDX43 (+27670), MB21D1 (+29858)
chr15	77305365	77305866	PSTPIP1 (+18190), TSPAN3 (+57954)
chr12	22558935	22571599	ST8SIA1 (-77619), C2CD5 (+132213)
chr11	36443096	36443722	PRR5L (+45854), TRAF6 (+88413)

chr5	94127733	94131451	ANKRD32 (+175540), MCTP1 (+490687)
chr4	40195867	40196759	RHOH (-2214)
chr6	42353871	42363833	MRPS10 (-173249), TRERF1 (+60931)
chr12	12537405	12537906	MANSC1 (-34181), DUSP16 (+177661)
chrX	42797766	42811880	MAOA (-710644)
chr6	106970350	106970851	AIM1 (+10871), RTN4IP1 (+106761)
chr19	4108186	4110586	ZBTB7A (-42443), MAP2K2 (+14740)
chr16	27416994	27417653	IL21R (+3841), GTF3C1 (+143903)
chr2	198058554	198083702	PGAP1 (-279673), ANKRD44 (+104383)
chr2	197039167	197039668	STK17B (-3119)
chr10	30991593	30992094	LYZL2 (-73153), ZNF438 (+329022)
chr3	113930069	113946920	DRD3 (-40596), ZNF80 (+17930)
chr4	26884955	26889831	STIM2 (+24930)
chr3	150916592	150924147	GPR171 (+609)
chr16	16054652	16055758	ABCC1 (+11771), ABCC6 (+262116)
chr1	211854593	211855094	NEK2 (-5884), LPGAT1 (+149270)
chr12	6553986	6555033	CD27 (+477)
chr22	47008011	47010947	CELSR1 (-76412), GRAMD4 (-6820)
chr12	31960139	31960640	BICD1 (-299773), H3F3C (-15215)
chr17	38754246	38755318	CCR7 (-33058), SMARCE1 (+49978)
chr11	60807126	60811572	CD5 (-60518), CD6 (+70197)
chr4	40302186	40303377	CHRNA9 (-34564), RHOH (+104255)
chr17	45808380	45815157	TBX21 (+1159), OSBPL7 (+87367)
chr17	47821985	47828708	KAT7 (-40570), SLC35B1 (-40030)
chr20	37470694	37471333	FAM83D (-83941), PPP1R16B (+36666)
chr2	234173752	234181486	SAG (-38848), ATG16L1 (+17402)
chr16	29018458	29026471	LAT (+26318), NPIP11 (+392885)
chr8	19483727	19484228	INTS10 (-190673), CSGALNACT1 (-23972)
chr22	40299270	40299771	TNRC6B (-274408), GRAP2 (+2435)
chr19	47436878	47439149	NPAS1 (-85063), ARHGAP35 (+16081)
chr16	57038362	57038863	NLRC5 (+15203), FAM192A (+181363)
chr1	160605661	160618700	CD84 (-62887), SLAMF1 (+4904)
chr17	33487097	33490110	UNC45B (+13768), SLC35G3 (+32808)
chr6	105903810	105904311	PRDM1 (-630134), PREP (-53102)
chr6	105900063	105911501	PRDM1 (-628413), PREP (-54823)
chr1	14059437	14060884	KAZN (-865039), PRDM2 (+28811)
chr16	57633161	57638132	GPR56 (-26772), GPR114 (+59046)
chr17	17083446	17083947	PLD6 (+25932), MPRIP (+137623)
chr22	37562925	37564462	IL2RB (-17664), C1QTNF6 (+20635)
chr12	9822347	9823366	CLEC2D (+548)
chr10	22943544	22944045	PIP4K2A (+59689), SPAG6 (+309396)
chr13	50996471	50997129	RNASEH2B (-487014), DLEU1 (+340493)
chr7	99816868	99817606	PVRIG (+378)
chr8	82009131	82009632	ZNF704 (-222366), PAG1 (+14921)
chr15	38964261	38964762	THBS1 (-908782), RASGRP1 (-107505)
chr11	14598605	14602616	ENSG00000256206 (-58721), PSMA1 (+64552)
chr12	9814544	9832825	CLEC2D (+1376), CLECL1 (+62210)
chr1	112140417	112140918	ADORA3 (-94558), RAP1A (-21737)
chr12	40007884	40018451	ABCD2 (+385)
chr6	12051910	12053364	EDN1 (-237959), HIVEP1 (+40066)
chr21	35308394	35309952	MRPS6 (-136650), ATP5O (-20889)
chr22	37565062	37565563	IL2RB (-19283), C1QTNF6 (+19016)
chr15	96382227	96382728	NR2F2 (-491468)
chr3	46015723	46016224	FYCO1 (+21333), CXCR6 (+29463)
chr5	75620153	75625379	IQGAP2 (-76308), SV2C (+243769)
chr8	116440097	116440598	TRPS1 (+240880)

chr19	6673919	6676080	TNFSF14 (-4401)
chr5	40383416	40384091	DAB2 (-958482), PTGER4 (-295846)
chr6	166829808	166830455	MPC1 (-33646), RPS6KA2 (+445907)
chr22	36771965	36773098	MYH9 (+11531), APOL1 (+123408)
chr4	101938388	101944356	EMCN (-502122), PPP3CA (+327265)
chrX	42802069	42802744	MAOA (-713060)
chr4	90216544	90217045	TIGD2 (+182827), SNCA (+541495)
chr6	152492422	152493070	SYNE1 (+465788), ESR1 (+481115)
chr17	37922658	37941763	GRB7 (+37187), IKZF3 (+88230)
chr22	25456883	25459564	CRYBB3 (-137593), TMEM211 (-115562)
chr3	71542107	71542608	FOXP1 (-362370), EIF4E3 (+232168)
chr6	37480289	37487227	CCDC167 (-16060), MDGA1 (+182008)
chr17	44095444	44099584	STH (+20898), KANSL1 (+172652)
chr11	60842562	60851807	CD5 (-22682), CD6 (+108033)
chr14	92332720	92333810	TC2N (+608)
chr2	106772689	106779594	UXS1 (+34653), C2orf40 (+94030)
chr11	35099577	35100963	CD44 (-60458), PDHX (+162151)
chr7	50419582	50420083	IKZF1 (+71515), FIGNL1 (+97589)
chr2	179894325	179898700	TTN (-224363), CCDC141 (+18273)
chr2	181989309	181989810	ITGA4 (-332392), UBE2E3 (+144227)
chr17	33371134	33382038	RFFL (+39752), LIG3 (+69073)
chr12	22560578	22565481	ST8SIA1 (-75382), C2CD5 (+134450)
chrX	78361984	78365900	GPR174 (-62527), P2RY10 (+163024)
chr14	93034968	93035469	RIN3 (+55101), LGMN (+179805)
chr17	55678822	55679323	ENSG00000166329 (+143600), MSI2 (+345178)
chr2	38890142	38899942	GALM (+1990), SRSF7 (+83594)
chr7	151465483	151466312	RHEB (-248888), PRKAG2 (+108312)
chr14	75980577	75982199	BATF (-7380), JDP2 (+82551)
chr2	242809947	242811134	CXXC11 (-1340)
chr13	24838950	24839640	C1QTNF9 (-42009), SPATA13 (+285351)
chr2	112912712	112913365	FBLN7 (+17077), ZC3H8 (+99649)
chr2	9821393	9821894	TAF1B (-161839), YWHAQ (-50899)
chr14	23010271	23010772	DAD1 (+47653), OR4E2 (+877225)
chr6	53196661	53204092	GCM1 (-186750), ELOVL5 (+13371)
chr8	29353764	29358817	DUSP4 (-148106), TMEM66 (+584432)
chr11	48023823	48024324	OR4B1 (-214270), PTPRJ (+21961)
chr22	26974954	26976094	TFIP11 (-67053), TPST2 (+10603)
chr6	35315991	35316492	FANCE (-103896), PPARD (+5851)
chr14	22941652	23040684	DAD1 (+67007), OR4E2 (+857871)
chr4	3204336	3204837	RGS12 (-111287), HTT (+128179)
chr4	81091194	81096210	ANTXR2 (-99985), PRDM8 (-12722)
chr1	156493112	156496578	MEF2D (-24225), IQGAP3 (+47487)
chr7	55603327	55603828	VOPP1 (+36640), LANCL2 (+170437)
chr6	108144702	108145203	SCML4 (+563)
chr2	204718786	204719287	CTLA4 (-13472), CD28 (+147766)
chr17	38016530	38024959	ZBP2 (-3672), IKZF3 (-304)
chr12	40015012	40015513	ABCD2 (-1710)
chr5	118605926	118606427	TNFAIP8 (-83832)
chr11	122940932	122941433	HSPA8 (-8140), CLMP (+124806)
chr11	78176049	78176550	GAB2 (-47448), NARS2 (+109609)
chr8	29846506	29854854	DUSP4 (-642495), TMEM66 (+90043)
chr6	108139540	108146695	SCML4 (+2398), SOBP (+331956)
chr16	57634252	57635560	GPR56 (-27513), GPR114 (+58305)
chr14	23013104	23013864	DAD1 (+44691), OR4E2 (+880187)
chr21	35303467	35312234	MRPS6 (-137972), ATP5O (-19567)
chr8	101398501	101399163	RNF19A (-83345), ANKRD46 (+173138)



chr11	60869346	60869847	CD5 (-270)
chr1	100862734	100863235	GPR88 (-140708), CDC14A (+44938)
chr9	126083867	126086186	STRBP (-54172), CRB2 (-33512)
chr2	143882341	143891095	ARHGAP15 (-165)
chr1	118206587	118207088	GDAP2 (+265415), MAN1A2 (+296767)
chr9	95721995	95735525	SUSD3 (-92229), FGD3 (+19027)
chr17	45735264	45738961	TBKBP1 (-35517), KPNB1 (+9909)
chr19	19713059	19713560	PBX4 (+16415), CILP2 (+64253)
chr10	8372730	8375794	GATA3 (+277606)
chr7	50354220	50356220	IKZF1 (+6902), FIGNL1 (+162202)
chr15	63772085	63772586	CA12 (-97976), USP3 (-24474)
chr6	45978658	45979159	SUPT3H (-633239), CLIC5 (+69223)
chr4	7857178	7857679	PSAPL1 (-420729), AFAP1 (+84224)
chr11	3034690	3035316	NAP1L4 (-21396), CARS (+43664)
chr17	66249598	66250248	ARSG (-5400), AMZ2 (+6208)
chr19	6536521	6537022	TNFSF9 (+5762), CD70 (+54391)
chr18	21573767	21574637	CABYR (-144740), LAMA3 (+304795)
chr13	30476809	30478393	UBL3 (-52780), KATNAL1 (+404020)
chr1	211526272	211526773	TRAF5 (+26344), RD3 (+139736)
chr11	128395685	128396313	ETS1 (+61438)
chr22	37545092	37546124	IL2RB (+422)
chr5	14705604	14707602	FAM105B (+41746), ANKH (+165284)
chr15	44966067	44979407	PATL2 (-3651)
chr3	45986383	45987303	CXCR6 (+332)
chr11	60870610	60871111	CD5 (+994)
chr1	160406457	160409253	VANGL2 (+37479), SLAMF6 (+85188)
chr14	52735194	52735695	PTGER2 (-45668), PTGDR (+1014)
chr8	126618587	126620095	TRIB1 (+176778), FAM84B (+951297)
chr11	118742870	118750542	DDX6 (-84861), CXCR5 (-7769)
chr14	61802702	61803203	HIF1A (-361387), PRKCH (+14518)
chr9	136545235	136551671	DBH (+46971), SARDH (+56589)
chr2	214103336	214104897	IKZF2 (-89059), SPAG16 (-44996)
chr13	74636802	74637582	KLF12 (-68006)
chr11	60827940	60828599	CD5 (-41597), CD6 (+89118)
chr6	166833295	166833796	MPC1 (-37060), RPS6KA2 (+442493)
chr6	24927627	24942270	LRRC16A (-344707), FAM65B (-23754)
chr1	183923694	183928035	APOBEC4 (-303417), COLGALT2 (+80998)
chr10	11192089	11192590	CELF2 (+132447), USP6NL (+381934)
chr4	101940355	101940988	EMCN (-501422), PPP3CA (+327965)
chr13	30715871	30728683	UBL3 (-297456), KATNAL1 (+159344)
chr14	97922272	97927106	VRK1 (+661048)
chr4	153505069	153508734	FBXW7 (-49649), TMEM154 (+94415)
chr8	11314595	11315560	BLK (-36432), SLC35G5 (+126681)
chr1	211508663	211509419	TRAF5 (+8862), RD3 (+157218)
chr18	21572353	21573154	CABYR (-146188), LAMA3 (+303347)
chr10	11185978	11195884	CELF2 (+131038), USP6NL (+383343)
chr17	62128029	62128530	ICAM2 (-30286), ERN1 (+79205)
chr5	80302830	80303331	CKMT2 (-226062), RASGRF2 (+46590)
chr16	75109533	75110168	LDHD (+40814), ZNRF1 (+76923)
chr20	24929859	24930679	CST7 (+403)
chr1	117340474	117360707	PTGFRN (-102088), CD2 (+53584)
chr20	42845751	42849106	JPH2 (-31211), FITM2 (+92380)
chr7	151841509	151842677	GALNT11 (+70710), KMT2C (+290997)
chr1	29251084	29257870	EPB41 (+40874), TMEM200B (+194536)
chr8	8729451	8730296	ERI1 (-129783), CLDN23 (+170426)
chr8	128985309	128995420	TMEM75 (-29774)

chr1	111209329	111218516	KCNA2 (-63872), KCNA3 (+3732)
chr11	76864229	76864881	MYO7A (+25245), GDPD4 (+133908)
chr6	16420380	16422367	GMPR (+182563), ATXN1 (+340313)
chr1	88702128	88702629	PKN2 (-447526), LMO4 (+908228)
chr10	22929210	22948260	PIP4K2A (+64749), SPAG6 (+304336)
chr9	74398436	74398937	TMEM2 (-14887), ABHD17B (+127160)
chr12	2102864	2103365	CACNA2D4 (-75113), DCP1B (+10562)
chr17	14104026	14105710	HS3ST3B1 (-99532), COX10 (+132022)
chr9	99160478	99162936	SLC35D2 (-15728), ZNF367 (+18904)
chr1	224810344	224813035	DNAH14 (-305679), CNIH3 (+7695)
chr2	136892297	136893857	THSD7B (-746672), CXCR4 (-19264)
chr3	46017050	46018020	FYCO1 (+19772), CXCR6 (+31024)
chr16	3264400	3266942	OR1F1 (+11424), ZNF200 (+19496)
chr3	114008486	114021822	TIGIT (+5205), ZBTB20 (+87334)
chr18	3056838	3063313	LPIN2 (-48131), MYOM1 (+160030)
chr15	64000794	64001295	FBXL22 (+111493), HERC1 (+125042)
chr5	61552006	61552648	KIF2A (-49952), C5orf64 (+618691)
chr9	2655083	2655737	KCNV2 (-62092), VLDLR (+33576)
chr11	36396380	36403320	PRR5L (+2295), TRAF6 (+131972)
chr12	6535750	6536417	CD27 (-17949), LTBR (+42885)
chr3	195913315	195914520	TFRC (-104858), ZDHHC19 (+24348)
chr7	142498598	142499099	EPHB6 (-53943), PRSS1 (+41519)
chr20	35271068	35276264	SLA2 (+953)
chr1	15904965	15906724	AGMAT (+5760), DNAJC16 (+52537)
chr20	55973542	55974630	RBM38 (+7623), CTCFL (+126077)
chr16	29713011	29713512	QPRT (+22904), C16orf54 (+44065)
chr17	66176604	66182402	AMZ2 (-64212), KPNA2 (+147427)
chr8	134071209	134072096	SLA (+950)
chr5	118635390	118635891	TNFAIP8 (-54368)
chr10	105224843	105233473	CALHM1 (-10513), CALHM3 (+9839)
chr22	23155462	23166922	IGLL5 (-68768), GGTL2 (+172376)
chr16	29159873	29160374	LAT (+163977), NPIP11 (+255226)
chr19	47452870	47463947	NPAS1 (-64668), ARHGAP35 (+36476)
chr15	56335080	56335720	NEDD4 (-126071), RFX7 (+200083)
chr9	123685662	123688563	PHF19 (-47507), TRAF1 (+3934)
chr8	27238001	27238502	PTK2B (+69253), CHRNA2 (+98561)
chr4	90208827	90210028	TIGD2 (+175460), SNCA (+548862)
chr1	203734136	203735626	LAX1 (+577)
chr3	105471551	105472052	CBLB (+116085), ALCAM (+386049)
chr2	96829225	96830452	DUSP2 (-18660), STARD7 (+44717)
chr22	25463184	25465082	CRYBB3 (-131684), TMEM211 (-121471)
chr3	46006299	46006938	CXCR6 (+20108), FYCO1 (+30688)
chr2	198869836	198870535	PLCL1 (+200760)
chr2	192068785	192070036	STAT4 (-53425), MYO1B (-40704)
chr5	150590241	150592530	ANXA6 (-53943), GM2A (-41067)
chr6	167459762	167462850	CCR6 (-74951), FGFR1OP (+48636)
chr1	15903758	15907492	AGMAT (+5980), DNAJC16 (+52317)
chr11	108095665	108097584	NPAT (-3256), ATM (+3066)
chr19	18230008	18230780	PIK3R2 (-33232), IL12RB1 (-20635)
chr12	69721582	69727207	LYZ (-17726), CPSF6 (+91078)
chr1	26099254	26103077	SEPN1 (-25501), MAN1C1 (+157207)
chr13	50938744	50942273	RNASEH2B (-543305), DLEU1 (+284202)
chr9	101815563	101816064	TGFBR1 (-51557), COL15A1 (+109893)
chr12	90275565	90276066	ATP2B1 (-173208)
chr7	7195389	7200309	CCZ1B (-331448), C1GALT1 (-24397)
chr1	117305346	117306342	PTGFRN (-146835), CD2 (+8837)

chr2	36467355	36467856	CRIM1 (-115463)
chr9	116278109	116283606	ZNF618 (-357704), RGS3 (+73847)
chrX	1598609	1603589	ASMTL (-29333), P2RY8 (+54901)
chr15	55567027	55579060	PIGB (-38114), RAB27A (-10452)
chr1	167772098	167775179	MPZL1 (+82452), ADCY10 (+109701)
chrX	13111458	13113409	FAM9C (-49713), ATXN3L (+226084)
chr2	158288556	158304949	ERMN (-112528), CYTIP (+3901)
chr7	90956220	90956721	FZD1 (+62688), MTERF (+553563)
chr1	26695889	26706176	ZNF683 (-1767)
chr16	50711007	50723755	SNX20 (-2118)
chr21	43825004	43826010	UBASH3A (+1483), RSPH1 (+90957)
chr6	149469030	149469531	TAB2 (-172907), UST (+400817)
chr20	51026207	51028124	TSHZ2 (-561780), ZFP64 (-218641)
chr9	74407243	74412420	TMEM2 (-26032), ABHD17B (+116015)
chr6	11258748	11259582	TMEM170B (-279346), NEDD9 (-26250)
chr14	22986357	22987952	DAD1 (+71020), OR4E2 (+853858)
chr16	27411366	27422273	IL21R (+3337), GTF3C1 (+144407)
chr3	133224462	133226352	CDV3 (-67167), BFSP2 (+106568)
chr17	38758841	38759342	CCR7 (-37368), SMARCE1 (+45668)
chr7	139910043	139910544	JHDM1D (-33459), SLC37A3 (+188055)
chr16	57609963	57614294	GPR56 (-50290), GPR114 (+35528)
chr10	72360661	72364037	PRF1 (+182)
chr14	71608704	71609205	SIPA1L1 (-387087), PCNX (+234833)
chr18	51790724	51791225	POLI (-4799)
chr1	160615216	160617210	SLAMF1 (+872)
chr1	117349974	117351969	PTGFRN (-101707), CD2 (+53965)
chr20	57720964	57723321	SLMO2 (-104179), ZNF831 (-43932)
chr9	277988	278656	KANK1 (-191969), DOCK8 (+63457)
chr1	89733638	89755573	GBP6 (-85011), GBP5 (-6062)
chr1	7989430	7992551	UTS2 (-77500), TNFRSF9 (+9935)
chr12	47598926	47618881	AMIGO2 (-135256), RPAP3 (+490940)
chr10	44748916	44749417	ZNF32 (-605015), CXCL12 (+131330)
chr17	34219623	34220254	CCL5 (-12427), RDM1 (+37838)
chr1	27159558	27160059	SFN (-29824), ZDHHC18 (+6608)
chr17	37946630	37953072	GRB7 (+54827), IKZF3 (+70590)
chr2	68986025	69008421	ARHGAP25 (+35256), BMP10 (+101426)
chr16	29672362	29679325	QPRT (-14514), SPN (+1264)
chrX	13014963	13029511	TMSB4X (+29008), FAM9C (+40484)
chr1	198586641	198658059	PTPRC (+14180)
chr7	3081624	3084458	CARD11 (+538)
chr17	14094736	14110500	HS3ST3B1 (-101782), COX10 (+129772)
chr1	167417553	167418250	CD247 (+69873), POU2F1 (+227836)
chr1	27989245	27990014	FGR (-27842), IFI6 (+9059)
chr3	45990398	45993692	CXCR6 (+5534), FYCO1 (+45262)
chrX	70842188	70843503	CXCR3 (-4486)
chr10	6616324	6628874	PRKCQ (-336)
chr4	871855	874410	CPLX1 (-53147), GAK (+52953)
chr2	38924899	38925400	GALM (+32098), SRSF7 (+53486)
chr3	16882646	16886399	DAZL (-238226), PLCL2 (-41929)
chr14	99396599	99400357	BCL11B (+339087)
chrX	78363671	78364595	GPR174 (-62336), P2RY10 (+163215)
chr7	142500062	142500563	EPHB6 (-52479), PRSS1 (+42983)
chr4	78748059	78748560	MRPL1 (-35364), CNOT6L (-7766)
chr7	142505975	142506476	EPHB6 (-46566), PRSS1 (+48896)
chr10	14603768	14605081	FRMD4A (-231542), CDNF (+275646)
chr19	10251123	10257544	EIF3G (-23756), DNMT1 (+51421)

chr2	99386436	99386937	MGAT4A (-39098), TSGA10 (+384693)
chr3	151968729	151978317	MBNL1 (-12306), SUCNR1 (+382092)
chr21	43821261	43829736	UBASH3A (+1475), RSPH1 (+90965)
chr8	128992363	128992864	TMEM75 (-32023)
chr22	27037108	27045777	CRYBA4 (+23515)
chr14	65753177	65759420	MAX (-187111), FUT8 (-121011)
chr2	38936957	38937458	SRSF7 (+41428), GALM (+44156)
chr2	231090477	231091125	SP140 (+355)
chr7	110652977	110653478	LRRN3 (-77834)
chr15	38938927	38947031	THBS1 (-930315), RASGRP1 (-85972)
chr11	117814861	117825540	IL10RA (-36862), TMPRSS13 (-20121)
chr15	69760772	69761640	RPLP1 (+16083), TLE3 (+629309)
chr19	30162047	30164118	PLEKHF1 (+7120), C19orf12 (+42880)
chr17	47823604	47825305	KAT7 (-41462), SLC35B1 (-39138)
chr12	127647212	127648457	NONE
chr10	47638687	47642649	AGAP10 (-400930), ANTXRL (-17566)
chr2	222379657	222386337	EPHA4 (+54013)
chr5	100188678	100190404	ST8SIA4 (+49429), FAM174A (+318532)
chr9	92034787	92036356	SEMA4D (-1824)
chr14	71448858	71449359	SIPA1L1 (-546933), PCNX (+74987)
chr6	158710467	158713028	TULP4 (-21944), GTF2H5 (+122364)
chr5	138944791	138945757	CXXC5 (-82603), UBE2D2 (+4523)
chr15	78682257	78682758	IREB2 (-48023), CRABP1 (+49842)
chr3	16522248	16523945	RFTN1 (+32116), OXNAD1 (+216391)
chr11	72862172	72871257	P2RY2 (-62629), FCHSD2 (-13409)
chr7	158987554	158992782	VIPR2 (-52519)
chr16	71915372	71915873	ZNF821 (+2427), ATXN1L (+35729)
chr10	14627708	14628209	FRMD4A (-255076), CDNF (+252112)
chr8	29346619	29352035	DUSP4 (-141142), TMEM66 (+591396)
chr6	33309151	33313927	KIFC1 (-47774), DAXX (-20748)
chr22	39482591	39496984	APOBEC3H (-3492)
chr22	37624524	37626916	SSTR3 (-17358), RAC2 (+14590)
chr5	14925656	14926157	FBXL7 (-574398), ANKH (-54020)
chr6	43349854	43353356	ABCC10 (-43687), ZNF318 (-14424)
chr11	104668618	104670875	PDGFD (-634912), CASP12 (+99413)
chr6	149458842	149463590	TAB2 (-180972), UST (+392752)
chr10	33442255	33443543	ITGB1 (-196077), NRP1 (+182291)
chr1	90204943	90205444	LRR8D (-81397), LRR8C (+106563)
chr19	6666821	6671251	CD70 (-77873), TNFSF14 (+1563)
chr2	172175545	172176046	TLK1 (-158453), METTL8 (+114800)
chr14	92335922	92337221	TC2N (-2699)
chr17	33860038	33863132	SLFN12L (-46709), SLFN14 (+23532)
chr7	50728475	50732422	DDC (-97295), GRB10 (+69601)
chr8	67576155	67576656	C8orf44-SGK3 (-3445), VCPIP1 (+3046)
chr5	49931173	49931674	EMB (-194223), PARP8 (-31348)
chr17	34214569	34221716	CCL5 (-10631), RDM1 (+39634)
chr22	36055450	36057247	APOL5 (-57570), APOL6 (+11907)
chr12	9884868	9885369	CLECL1 (+776)
chr2	196400119	196400620	SLC39A10 (-121101)
chr12	92267056	92273545	DCN (-693401), BTG1 (+269372)
chr3	16338999	16362011	OXNAD1 (+43799), RFTN1 (+204708)
chr22	25458198	25458901	CRYBB3 (-137267), TMEM211 (-115888)
chr12	51714523	51715024	SMAGP (-50100), BIN2 (+3174)
chr1	111768785	111769466	CHIA (-64412), CHI3L2 (+25733)
chr5	14992975	14993476	FBXL7 (-507079), ANKH (-121339)
chr22	24036346	24039988	RGL4 (+5119), ZNF70 (+55112)

chr2	234178431	234180388	SAG (-37057), ATG16L1 (+19193)
chr14	97924698	97926035	VRK1 (+661726)
chr19	39027078	39030995	MAP4K1 (+79527), RYR1 (+104567)
chr6	20364909	20369239	MBOAT1 (-154444), E2F3 (-35324)
chr2	158325375	158326145	CYTIP (-25106), ACVR1C (+159757)
chr8	59711075	59721331	NSMAF (-144110), TOX (+315564)
chr11	58292777	58293278	OR5B21 (-17450), LPXN (+52611)
chr19	39028530	39030464	MAP4K1 (+79067), RYR1 (+105027)
chr18	3059869	3061599	LPIN2 (-48789), MYOM1 (+159372)
chr18	2982378	2982879	LPIN2 (+29316), EMILIN2 (+135601)
chr1	117277788	117285090	IGSF3 (-71125), CD2 (-15568)
chr4	90202489	90230019	TIGD2 (+182286), SNCA (+542036)
chr17	3669192	3669900	ITGAE (+34991), GSG2 (+42335)
chr8	124398319	124399034	ZHX1 (-111942), ATAD2 (+10028)
chr6	52167743	52174527	PAQR8 (-55791), MCM3 (-21500)
chr2	86078379	86081854	ST3GAL5 (+36020), ATOH8 (+99100)
chr19	16479051	16479910	KLF2 (+43853), EPS15L1 (+103342)
chr1	160608287	160609003	CD84 (-59351), SLAMF1 (+8440)
chr2	106352782	106359090	FHL2 (-340255), NCK2 (-5418)
chr5	118666215	118666716	TNFAIP8 (-23543)
chr2	29230923	29241709	C2orf71 (+60811), WDR43 (+118807)
chr8	142255361	142256160	SLC45A4 (-17088), GPR20 (+121606)
chr6	53199626	53201609	GCM1 (-186991), ELOVL5 (+13130)
chr8	142253897	142256794	SLC45A4 (-16673), GPR20 (+122021)
chr12	69724758	69725519	LYZ (-16982), CPSF6 (+91822)
chr4	90236681	90240393	TIGD2 (+204569), SNCA (+519753)
chr3	71499999	71507918	FOXP1 (-323971), EIF4E3 (+270567)
chr6	159474643	159488174	FNDC1 (-109020), TAGAP (-15225)
chr5	53905928	53906557	SNX18 (+92650), ESM1 (+375248)
chr18	2641792	2642293	SMCHD1 (-13694), NDC80 (+70533)
chr21	46077888	46078389	KRTAP12-4 (-3563), KRTAP12-3 (+290)
chr10	3919311	3920311	AKR1E2 (-948635), KLF6 (-92344)
chr4	78114211	78116494	CXCL13 (-317554), CCNG2 (+37049)
chr8	27231840	27240371	PTK2B (+67107), CHRNA2 (+100707)
chr5	35853784	35854679	IL7R (-2719)
chr6	157956243	157957704	SNX9 (-287322), ZDHHC14 (+154809)
chr2	112943583	112947475	FBLN7 (+49567), ZC3H8 (+67159)
chr14	91698131	91699157	GPR68 (+21625), C14orf159 (+117930)
chr18	2968151	2968854	LPIN2 (+43442), EMILIN2 (+121475)
chr1	25290864	25291671	RUNX3 (+233)
chr22	24186917	24187418	SLC2A11 (-11891), DERL3 (-5975)
chr3	140984807	140987281	ZBTB38 (-120610), ACPL2 (+35374)
chr6	143234678	143235179	HIVEP2 (+31409), GPR126 (+611863)
chr16	89826373	89832390	ZNF276 (+41430), FANCA (+53672)
chr1	117280415	117281933	IGSF3 (-70860), CD2 (-15833)
chr21	32531910	32532411	KRTAP19-8 (-121366), TIAM1 (+399129)
chr8	134069523	134070217	SLA (+2733), TG (+190664)
chr3	187691411	187694767	LPP (-237632), BCL6 (-229574)
chr5	75838150	75840354	F2RL2 (+80007), IQGAP2 (+140178)
chr1	117299288	117300087	PTGFRN (-152991), CD2 (+2681)
chr16	11326610	11328178	SOCS1 (+22642), CIITA (+356339)
chr12	838082	838789	NINJ2 (-65491), WNK1 (-23653)
chr18	42339339	42340034	SLC14A2 (-855079), SETBP1 (+78824)
chr22	20816697	20821237	SCARF2 (-26821), KLHL22 (+31203)
chr3	186742777	186744028	ST6GAL1 (+95129), RPL39L (+113908)
chr13	49720783	49721674	MLNR (-73245), FNDC3A (+171181)

chr3	111261124	111261625	CD96 (+410)
chr1	209931251	209932089	TRAF3IP3 (-173)
chr15	63790566	63791331	CA12 (-116589), USP3 (-5861)
chr3	27521319	27522240	SLC4A7 (-23535), EOMES (+242209)
chr9	130482072	130482573	PTRH1 (+4829), STXBP1 (+107779)
chr9	80091094	80091893	GNA14 (+171729), VPS13A (+299133)
chr16	57622389	57629119	GPR56 (-36665), GPR114 (+49153)
chr2	204735016	204736349	ICOS (-65788), CTLA4 (+3174)
chr1	155916098	155916913	RXFP4 (+5026), ARHGEF2 (+31812)
chr15	60875400	60876780	NARG2 (-104746), RORA (+43572)
chr14	65753685	65754352	MAX (-184831), FUT8 (-123291)
chr6	53096674	53097175	GCM1 (-83298), ELOVL5 (+116823)
chr1	115641629	115643205	TSPAN2 (-10332), NGF (+238440)
chr22	20911343	20912034	SERPIND1 (-216478), MED15 (+49792)
chr1	167486449	167487874	CD247 (+613)
chr4	40200925	40202457	CHRNA9 (-135655), RHOH (+3164)
chr15	64183125	64187145	HERC1 (-59048), DAPK2 (+147331)
chr21	46498037	46499003	ADARB1 (+4027), POFUT2 (+209293)
chr14	22976227	22976728	DAD1 (+81697), OR4E2 (+843181)
chr17	56421170	56422568	BZRAP1 (-16424), SUPT4H1 (+7694)
chr2	189848356	189849978	COL3A1 (+10121), COL5A2 (+195438)
chr2	68964583	68965378	ARHGAP25 (+3014), BMP10 (+133668)
chr5	100224131	100228882	ST8SIA4 (+12463), FAM174A (+355498)
chr17	55680085	55681365	ENSG00000166329 (+141948), MSI2 (+346830)
chr1	53877500	53879077	LRP8 (-84603), DMRTB1 (-46783)
chr9	134107393	134115052	PPAPDC3 (-53858), NUP214 (+110275)
chr20	42696859	42700417	JPH2 (+117580), TOX2 (+155146)
chr4	122101662	122104855	NDNF (-109586), TNIP3 (+45362)
chr17	72456189	72468245	CD300A (-338)
chr13	100004564	100005065	TM9SF2 (-148856), GPR183 (-45156)
chr9	99161198	99161699	SLC35D2 (-15470), ZNF367 (+19162)
chr1	117293783	117294284	CD2 (-2973)
chr1	114409832	114418604	PTPN22 (+163)
chr1	203575533	203576885	ATP2B4 (-19480), OPTC (+112938)
chr1	158898831	158905026	PYHIN1 (+587)
chr2	97578809	97579600	SEMA4C (-43497), FAHD2B (+181371)
chr17	80842766	80844381	ZNF750 (-45120), B3GNTL1 (+166112)
chr1	111754555	111772794	CHIA (-69863), CHI3L2 (+20282)
chr1	53096959	53104969	FAM159A (+1948), ECHDC2 (+286475)
chr11	128494578	128495716	FLI1 (-68743), ETS1 (-37710)
chr12	7058161	7058662	PTPN6 (-2022)
chr5	35849869	35864252	IL7R (+110)
chr17	4948010	4955044	ZFP3 (-30016), SLC52A1 (-12800)
chr14	99691943	99692773	BCL11B (+45207)
chr17	65432046	65432547	NOL11 (-281652), PITPNC1 (+58026)
chr16	68449932	68452548	SMPD3 (+31351), PRMT7 (+106203)
chr11	60738983	60740580	CD6 (+630)
chr4	2292290	2293701	MXD4 (-28975), ZFYVE28 (+127394)
chr16	68104167	68104668	DDX28 (-46648), NFATC3 (-15143)
chr11	118203704	118219102	CD3G (-3668), CD3D (+2056)
chr11	128173176	128173677	ETS1 (+284010)
chr12	10101366	10101867	CLEC12A (-2298)
chr15	22459491	22469012	TUBGCP5 (-369143), OR4N4 (+81870)
chr1	90320406	90321047	ZNF326 (-139947), LRR8D (+34136)
chr1	168408708	168409209	XCL2 (+104276), TBX19 (+158681)
chr12	29255144	29258680	FAR2 (-119686), CCDC91 (+913533)

chr22	26988450	26988951	TPST2 (-2574)
chr17	75435395	75438444	TNRC6C (-564217), SEPT9 (+159428)
chr17	33863857	33865691	SLFN12L (-49898), SLFN14 (+20343)
chr1	89662859	89667606	GBP4 (-618)
chr2	216921259	216923918	MREG (-44243), PECR (+23950)
chr14	72917641	72918770	DPF3 (+442603), RGS6 (+519050)
chr19	7409061	7416913	ENSG00000263264 (-861)
chr2	237453109	237458665	IQCA1 (-39702), ACKR3 (-22397)
chr5	75975493	75976414	F2RL2 (-56695), F2R (-35914)
chr17	45736794	45738498	TBKBP1 (-34984), KPNB1 (+10442)
chr17	44096663	44098892	STH (+21162), KANSL1 (+172388)
chr8	126959012	126959513	TRIB1 (+516700), FAM84B (+611375)
chr1	90071762	90075039	LRR8C (-25230), LRR8B (+82939)
chr1	26316761	26317951	STMN1 (-84399), PAFAH2 (+7292)
chr7	149565507	149566226	ATP6V0E2 (-4190)
chr3	177255706	177256962	TBL1XR1 (-342068)
chr1	150081980	150083765	PLEKHO1 (-39297), VPS45 (+43504)
chrX	10079168	10079669	CLCN4 (-45605), ENSG00000234469 (+144027)
chr16	29673520	29677442	SPN (+901)
chr14	62136735	62138823	HIF1A (-26561), PRKCH (+349344)
chr18	2959755	2962516	LPIN2 (+50809), EMILIN2 (+114108)
chr6	138226202	138226703	TNFAIP3 (+37872), PERP (+202195)
chr1	26640359	26649415	UBXN11 (-33), CD52 (+439)
chr1	198607448	198607949	PTPRC (-471)
chr2	64953187	64955715	SLC1A4 (-262084), SERTAD2 (-73404)
chr12	46612282	46614577	SCAF11 (-229082), SLC38A1 (+49365)
chr17	33567399	33567900	SLFN5 (-2405)
chr3	71534090	71548628	FOXP1 (-361371), EIF4E3 (+233167)
chr2	136894357	136895685	THSD7B (-744728), CXCR4 (-21208)
chr9	130782187	130797997	DPM2 (-89329), NAIF1 (+39508)
chr14	23036296	23036797	DAD1 (+21628), OR4E2 (+903250)
chr3	54462879	54463781	CACNA2D3 (+306637), LRTM1 (+498771)
chr13	41351401	41352056	SLC25A15 (-11904), MRPS31 (-6420)
chr1	209917955	209934392	TRAF3IP3 (-5669), HSD11B1 (+66664)
chr7	142490731	142512086	EPHB6 (-51383), PRSS1 (+44079)
chr2	148419931	148422487	ACVR2A (-180877)
chr12	122936380	122939221	CLIP1 (-72760), ZCCHC8 (+47717)
chr14	64116061	64119973	PPP2R5E (-107925), SGPP1 (+76740)
chr2	97010757	97011258	ARID5A (-191478), NCAPH (+9483)
chr4	26887850	26888516	STIM2 (+25720)
chr21	15961239	15966422	SAMSN1 (-8108), NRIP1 (+473490)
chr5	163341943	163344518	MAT2B (+410677)
chr14	91716015	91717882	GPR68 (+3320), C14orf159 (+136235)
chr10	97595339	97597959	CCNJ (-206691), ENTPD1 (+81240)
chr7	30360451	30362806	ZNRF2 (+37706), NOD1 (+156767)
chr14	53206858	53212999	STYX (+13029), GNPAT1 (+48390)
chr16	57168488	57169670	FAM192A (+50897), NLRC5 (+145669)
chr11	12214700	12230377	MICALCL (-85908), MICAL2 (+90401)
chr17	75662055	75664746	TNRC6C (-337736), SEPT9 (+385909)
chr11	73706284	73706785	UCP2 (-12183), UCP3 (+13945)
chr18	2632691	2645506	SMCHD1 (-16638), NDC80 (+67589)
chr16	27210440	27211810	KDM8 (-4171)
chr15	73031454	73033658	ADPGK (+43570), BBS4 (+54028)
chr16	22368253	22368754	CDR2 (+17434), POLR3E (+59774)
chr12	90255073	90260047	ATP2B1 (-154952)
chr5	156997729	156998896	ADAM19 (+4470), NIPAL4 (+111286)

chr6	154561441	154572436	IPCEF1 (+84276), OPRM1 (+235303)
chr3	33101537	33102038	TMPPE (+36505), CCR4 (+108722)
chr5	14590259	14599435	FAM105B (-70010), TRIO (+451036)
chr7	3083047	3083994	CARD11 (+58)
chr6	5173355	5176598	LYRM4 (+86195), PPP1R3G (+89257)
chr20	35642143	35645654	SAMHD1 (-63653), RBL1 (+80499)
chr16	4538439	4539333	NMRAL1 (-12579), CDIP1 (+26224)
chr2	233174928	233175839	ALPP (-67860), DIS3L2 (+349091)
chr14	61799211	61801737	HIF1A (-363866), PRKCH (+12039)
chr17	17305800	17310022	MED9 (-72389), NT5M (+101262)
chr16	30563514	30564015	ZNF747 (-17097), ZNF764 (+5819)
chr10	70963128	70963629	HKDC1 (-16680), SUPV3L1 (+23391)
chr9	80815941	80816442	GNAQ (-169818), CEP78 (-34931)
chr18	72705029	72709181	ZADH2 (+214198), ZNF407 (+364129)
chr11	6763112	6769860	MRPL17 (-61854), OR2AG2 (+23800)
chr22	37566270	37566953	IL2RB (-20582), C1QTNF6 (+17717)
chr15	85139855	85142966	ZSCAN2 (-2825)
chr2	113926159	113926660	PSD4 (-5138), IL1RN (+50936)
chr12	92985240	93000594	PLEKHG7 (-137394), CLLU1 (+175182)
chr7	50342941	50362900	IKZF1 (+4603), FIGNL1 (+164501)
chr7	127054339	127054973	ZNF800 (-21911), GCC1 (+171005)
chr19	4109114	4109777	ZBTB7A (-42503), MAP2K2 (+14680)
chrX	2595195	2595696	DHRX (-176427), CD99 (-13774)
chr9	123894539	123896353	CNTRL (+58156), RAB14 (+68701)
chr3	187716257	187719873	BCL6 (-254550), LPP (-212656)
chr1	160764732	160771637	LY9 (+2237), CD244 (+64365)
chr3	177254529	177258762	TBL1XR1 (-342380)
chr5	95204076	95207203	GLRX (-47222), ELL2 (+92135)
chr6	143176425	143177124	HIVEP2 (+89563), GPR126 (+553709)
chr2	68991151	68992164	ARHGAP25 (+29691), BMP10 (+106991)
chr18	3058772	3059273	LPIN2 (-47078), MYOM1 (+161083)
chr17	70722973	70723474	SLC39A11 (+365603), SOX9 (+606063)
chr6	144674295	144675812	UTRN (+62089)
chr11	128385873	128386374	ETS1 (+71313)
chr14	91692704	91693427	GPR68 (+27203), C14orf159 (+112352)
chr2	29233765	29235603	C2orf71 (+62443), WDR43 (+117175)
chr16	29020169	29020797	LAT (+24336), NPIP11 (+394867)
chr15	44958344	44958984	SPG11 (-2802)
chr12	3979361	3979862	EFCAB4B (-117344), PARP11 (+2928)
chr4	6900194	6902707	TBC1D14 (-10121), KIAA0232 (+116984)
chr11	118098395	118099171	AMICA1 (-2974)
chr2	37842878	37843979	CDC42EP3 (+55905), QPCT (+271712)
chr4	25939828	25940690	RBPJ (-381073), SMIM20 (+24433)
chrX	13031697	13032332	FAM9C (+30706), TMSB4X (+38786)
chr18	9082843	9084673	NDUFV2 (-18870), SOGA2 (+366389)
chr2	109646233	109651772	SH3RF3 (-96994), EDAR (-43175)
chr2	101977799	101978430	RNF149 (-52957), CREG2 (+25942)
chr2	45405554	45406055	SIX2 (-169236), SRBD1 (+432615)
chr11	118071015	118105812	SCN2B (-41026), AMICA1 (+7395)
chr6	25033348	25044521	LRR16A (-240721), FAM65B (-127740)
chr5	39188764	39189265	RICTOR (-114505), FYB (+81744)
chr1	206976974	206977631	IL20 (-61396), IL19 (+5088)
chr6	33870147	33876929	MLN (-101750), GRM4 (+227905)
chr1	93507272	93508960	FAM69A (-81059), MTF2 (-36679)
chr12	47700588	47701955	AMIGO2 (-227624), RPAP3 (+398572)
chr5	49885070	49891998	EMB (-151333), PARP8 (-74238)



chr12	109873494	109873995	KCTD10 (+41604), MYO1H (+88037)
chr1	89533450	89537026	GBP1 (-4195)
chr17	56234433	56234934	OR4D2 (-12333), OR4D1 (+2190)
chr6	31539866	31540797	TNF (-3012), LTA (+501)
chr12	121470323	121477632	OASL (+3067), HNF1A (+57632)
chr21	35347901	35349927	MRPS6 (-96909), ATP5O (-60630)
chr1	203733078	203733579	LAX1 (-975)
chr2	68616021	68616522	APLF (-78421), PLEK (+23967)
chr2	109964637	109966452	SH3RF3 (+219548), SEPT10 (+406238)
chr12	91430612	91431113	EPYC (-32060), KERA (+20897)
chr10	8444637	8445138	GATA3 (+348232)
chr21	35319456	35324763	MRPS6 (-123713), ATP5O (-33826)
chr1	29253778	29254446	EPB41 (+40509), TMEM200B (+194901)
chr12	92420381	92432040	DCN (-849311), BTG1 (+113462)
chrX	1775688	1777717	ASMT (+42809), ZBED1 (+642305)
chr16	27412749	27414054	IL21R (-81)
chr2	106709037	106715154	C2orf40 (+29984), UXS1 (+98699)
chrX	13092201	13115852	FAM9C (-41306), ATXN3L (+234491)
chr7	157264721	157265222	DNAJB6 (+135312)
chr14	61796735	61797590	HIF1A (-367177), PRKCH (+8728)
chr3	114014964	114015930	TIGIT (+5498), ZBTB20 (+87041)
chr12	110516365	110518586	IFT81 (-44706), C12orf76 (-11976)
chr7	55598922	55607522	VOPP1 (+36996), LANCL2 (+170081)
chr15	74687650	74697107	CYP11A1 (-32298), SEMA7A (+34429)
chr20	47336295	47336796	SULF2 (-921216), PREX1 (+107874)
chr14	106470950	106472555	TMEM121 (+478813)
chr10	22970858	22971359	PIP4K2A (+32375), SPAG6 (+336710)
chr13	41057338	41062331	FOXO1 (+180899), COG6 (+830021)
chr14	97427845	97431184	VRK1 (+165874)
chr16	57066454	57081705	NLRC5 (+50670), FAM192A (+145896)
chr4	40198251	40200193	RHOH (+695)
chr1	205409695	205410495	CDK18 (-63631), LEMD1 (-18913)
chr11	72868217	72869496	P2RY2 (-60487), FCHSD2 (-15551)
chr1	160805499	160810013	CD244 (+24794), LY9 (+41808)
chr19	10519100	10520700	PDE4A (-11431), CDC37 (-5691)
chr3	56832880	56833671	CCDC66 (+242075), ARHGFE3 (+280060)
chr1	160487607	160494741	SLAMF6 (+1869), VANGL2 (+120798)
chr11	122596830	122600108	CRTAM (-110739), UBASH3B (+72086)
chr2	86810180	86812518	RNF103 (+39629), KDM3A (+143425)
chr14	23037694	23038479	DAD1 (+20088), OR4E2 (+904790)
chr17	2169074	2169575	SRR (-37673), HIC1 (+209721)
chr2	61218873	61221232	PEX13 (-24804), REL (+111397)
chr4	143338090	143338719	INPP4B (+429038), IL15 (+780650)
chr17	33538391	33549200	SLFN5 (-26259), SLC35G3 (-22384)
chr20	38252495	38253496	DHX35 (+662018)
chr14	61793291	61795749	HIF1A (-369820), PRKCH (+6085)
chr4	81094209	81094844	ANTXR2 (-100810), PRDM8 (-11897)
chr10	47640140	47640775	AGAP10 (-400720), ANTXRL (-17776)
chr5	75621802	75622702	IQGAP2 (-76822), SV2C (+243255)
chr9	136541673	136542174	DBH (+40442), SARDH (+63118)
chr5	118676150	118677240	TNFAIP8 (-13314)
chr2	234330749	234331250	DGKD (+67847), USP40 (+143236)
chr15	81583807	81586997	STARD5 (+31064), IL16 (+67661)
chr6	37469955	37470709	CCDC167 (-2634)
chr2	98333447	98334847	ZAP70 (+4124), TMEM131 (+278207)
chr11	117843157	117888557	TMPRSS4 (-81947), IL10RA (+8794)

chr19	15624554	15626696	CYP4F3 (-126084), CYP4F22 (+6321)
chr17	72737675	72738176	SLC9A3R1 (-6865), RAB37 (+4870)
chr3	156199087	156204885	SSR3 (+70987), KCNAB1 (+363649)
chr3	33082420	33106830	TMPPE (+43668), CCR4 (+101559)
chr2	25781088	25781938	DNMT3A (-216054), DTNB (+114990)
chr1	160490129	160490630	SLAMF6 (+2663), VANGL2 (+120004)
chr6	52169399	52171360	PAQR8 (-56546), MCM3 (-20745)
chr1	92950756	92951421	GFI1 (-1578)
chr6	139851698	139852199	CITED2 (-156192)
chr22	50319147	50320049	PIM3 (-34563), CRELD2 (+7315)
chrX	135860321	135864451	ARHGEF6 (+1861), CD40LG (+132034)
chr13	42064994	42069697	RGCC (+35651), VWAA8 (+467874)
chr11	118086346	118086847	SCN2B (-39209), AMICA1 (+9212)
chr17	29821753	29822254	RAB11FIP4 (+103362), COPRS (+364352)
chr17	266073	266704	RPH3AL (-63791), FAM101B (+29341)
chr5	100225324	100226967	ST8SIA4 (+12824), FAM174A (+355137)
chr11	128347116	128347617	ETS1 (+110070)
chr17	33857247	33871500	SLFN12L (-49498), SLFN14 (+20743)
chr2	196420577	196431626	SLC39A10 (-95369)
chr6	81134282	81134783	BCKDHB (+318169)
chr2	122455932	122459813	CLASP1 (-50821), MKI67IP (+36626)
chr16	79320394	79320895	MAF (+313966)
chr2	37826887	37828247	CDC42EP3 (+71767), QPCT (+255850)
chr1	198608740	198610199	PTPRC (+1300)
chr12	8797183	8797684	AICDA (-31967), MFAP5 (+17974)
chr6	35579219	35579720	TULP1 (-98755), FKBP5 (+116890)
chr7	7296546	7299967	C1GALT1 (+76011), COL28A1 (+277227)
chr7	149562190	149563385	ATP6V0E2 (-7269), ZNF862 (+27332)
chr12	57869128	57876120	ARHGAP9 (+1009), GLI1 (+18703)
chr1	224811481	224811982	DNAH14 (-305637), CNIH3 (+7737)
chr13	75900309	75900810	TBC1D4 (+155690)
chr14	61918311	61918812	HIF1A (-245778), PRKCH (+130127)
chr17	3666922	3667423	ITGAE (+37364), GSG2 (+39962)
chr17	74139160	74143488	FOXJ1 (-3944)
chr22	20817760	20818999	SCARF2 (-26234), KLHL22 (+31790)
chr14	98069609	98071417	VRK1 (+806872)
chr1	89534344	89536161	GBP1 (-4210)
chr14	24078372	24081567	JPH4 (-31976), DHRS2 (-25612)
chr17	33376821	33380645	RFFL (+37605), LIG3 (+71220)
chr5	109389561	109390062	MAN2A1 (+364745), TMEM232 (+672554)
chr1	109187595	109188237	HENMT1 (+16232), NBPF6 (+269495)
chr20	42697351	42697852	JPH2 (+118616), TOX2 (+154110)
chr13	27295920	27296421	GPR12 (+38751), WASF3 (+164284)
chr6	42742356	42744208	RPL7L1 (-104091), TBCC (-28724)
chr21	19155924	19156717	CHODL (-460829), BTG3 (-171159)
chr12	94601724	94602225	PLXNC1 (+59476), CCDC41 (+251753)
chr16	89550297	89550934	ANKRD11 (+6353), ZNF778 (+266498)
chr15	85859455	85860223	AKAP13 (-64121), PDE8A (+336168)
chr19	38539307	38539962	SIPA1L3 (+141767), DPF1 (+175255)
chr11	36397309	36399617	PRR5L (+908)
chr3	16883801	16884863	DAZL (-238035), PLCL2 (-42120)
chr17	33813420	33815965	SLFN12L (+183)
chr3	113932074	113933947	DRD3 (-35112), ZNF80 (+23414)
chr12	57869708	57874867	ARHGAP9 (+1345), GLI1 (+18367)
chr6	19719654	19720155	ID4 (-117712)
chr6	112348470	112348971	FYN (-154066), WISP3 (-26741)

chr17	66180308	66180809	AMZ2 (-63156), KPNA2 (+148483)
chr17	46506909	46507557	SKAP1 (+319)
chr3	10282465	10286253	TATDN2 (-5348), IRAK2 (+77810)
chr16	29611331	29612097	SPN (-62866), SULT1A4 (+143934)
chr16	78775328	78778182	WVOX (+643445), MAF (+857856)
chr16	84640908	84641619	TLDC1 (-102900), COTL1 (+10419)
chr8	145002185	145003845	EPPK1 (-50383), PLEC (+22029)
chr16	89827906	89828407	ZNF276 (+40205), FANCA (+54897)
chr10	63998238	63998739	RTKN2 (+29977), ARID5B (+337430)
chr2	154999804	155000305	KCNJ3 (-554756), GALNT13 (+271629)
chr15	38962988	38963489	THBS1 (-910055), RASGRP1 (-106232)
chrX	13105792	13106705	FAM9C (-43528), ATXN3L (+232269)
chr6	159463139	159465219	EZR (-223735), TAGAP (+2005)
chr2	85064872	85078493	TRABD2A (+36686), DNAH6 (+328104)
chr1	159035905	159040682	AIM2 (+8397), IFI16 (+58612)
chr2	158298305	158300545	ERMN (-115200), CYTIP (+1229)
chr1	156494515	156495016	MEF2D (-24146), IQGAP3 (+47566)
chr1	92014195	92014696	CDC7 (+47781), TGFBR3 (+337341)
chr13	42965584	42972633	TNFSF11 (-179180), AKAP11 (+122820)
chr1	192486064	192486565	RGS1 (-58542), RGS21 (+200193)
chr12	14569533	14571583	ATF7IP (+51942), PLBD1 (+150725)
chr6	167362904	167364731	RPS6KA2 (-87779), RNASET2 (+6372)
chr15	75896512	75901528	PTPN9 (-27390), SNUPN (+19009)
chr5	76033283	76034726	F2RL1 (-80797), F2R (+22137)
chr6	146187712	146188213	FBXO30 (-52074), SHPRH (+97562)
chr2	37826192	37829797	CDC42EP3 (+71339), QPCT (+256278)
chr2	242805171	242805672	PDCD1 (-4362)
chr4	7828784	7830898	PSAPL1 (-393141), AFAP1 (+111812)
chr3	46578608	46582562	TDGF1 (-38142), RTP3 (+41604)
chr10	30994309	30994943	LYZL2 (-75935), ZNF438 (+326240)
chr19	42390602	42391797	ARHGEF1 (+2685), RABAC1 (+72342)
chr1	160508130	160513413	SLAMF6 (-17729), CD84 (+38522)
chr3	59433521	59439773	FAM3D (-784072)
chr3	130183678	130184341	COL6A6 (-95168), COL6A5 (+119651)
chr1	202134305	202135131	PTPN7 (-4009)
chr5	146173703	146174204	GPR151 (-278201), PPP2R2B (+261583)
chr7	42792929	42794131	GLI3 (-516918), ENSG00000256646 (+178243)
chr9	31345779	31349338	NONE
chr6	167454102	167457063	CCR6 (-80674), FGFR1OP (+42913)
chr16	68449707	68453773	SMPD3 (+30851), PRMT7 (+106703)
chr10	33424800	33425458	ITGB1 (-178307), NRP1 (+200061)
chr18	29618159	29624355	RNF138 (-50561), RNF125 (+22922)
chr19	19708560	19709264	PBX4 (+20813), CILP2 (+59855)
chr7	142507272	142507773	EPHB6 (-45269), PRSS1 (+50193)
chr10	129894103	129894604	MKI67 (+30295), PTPRE (+189029)
chr2	54221418	54221919	ACYP2 (-120972), PSME4 (-23692)
chr10	26724566	26732012	PDSS1 (-258299), APBB1IP (+1157)
chr1	151877519	151878918	THEM5 (-52046), THEM4 (+4065)
chrX	1581757	1582576	ASMTL (-10401), P2RY8 (+73833)
chr3	31267044	31268226	GADL1 (-331378), STT3B (-306647)
chr1	160525293	160552445	SLAMF6 (-45826), CD84 (+10425)
chr7	55600132	55602789	VOPP1 (+38757), LANCL2 (+168320)
chr6	159458726	159467254	EZR (-222546), TAGAP (+3194)
chr1	111172870	111192842	KCNA2 (-32805), KCNA3 (+34799)
chr3	195906030	195908480	TFRC (-98195), ZDHHC19 (+31011)
chr12	68021971	68027093	DYRK2 (-17969), CAND1 (+361471)

chr5	39192766	39193267	RICTOR (-118507), FYB (+77742)
chr1	117293188	117316085	PTGFRN (-148042), CD2 (+7630)
chr9	126963640	126966262	NEK6 (-55291), LHX2 (+191062)
chr2	201248181	201248682	SPATS2L (+77558), KCTD18 (+126354)
chrX	1600072	1601051	ASMTL (-28796), P2RY8 (+55438)
chr2	242248743	242249388	HDLBP (-36765), SEPT2 (-5449)
chr1	232664947	232665448	SIPA1L2 (+32106), DISC1 (+902637)
chr22	24822945	24824702	ADORA2A (+294)
chrX	47221156	47222272	ZNF157 (-8268), USP11 (+129400)
chr11	117150993	117152238	BACE1 (+35356), RNF214 (+48164)
chr14	98651278	98651779	NONE
chr7	50351130	50352696	IKZF1 (+3595), FIGNL1 (+165509)
chr6	112071789	112076745	TRAF3IP2 (-146818), FYN (+120388)
chr13	84711261	84711924	SLITRK1 (-255065)
chr4	90214292	90215155	TIGD2 (+180756), SNCA (+543566)
chr16	50714819	50715641	SNX20 (+33)
chr19	8256936	8261756	FBN3 (-44616), CERS4 (-14891)
chr11	118208937	118210059	CD3D (+3961), CD3E (+34238)
chr9	95825246	95825747	C9orf89 (-33003), SUSD3 (+4508)
chr8	133991773	133992516	SLA (+80458), TG (+112939)
chr16	3675767	3676268	DNASE1 (-25820), SLX4 (-14419)
chr6	25056040	25057735	LRRC16A (-222768), FAM65B (-145693)
chr2	39353595	39356005	SOS1 (-6608), CDKL4 (+101873)
chr1	227070339	227070975	ADCK3 (-14580), PSEN2 (+12393)
chr2	61046229	61046730	REL (-62176), PAPOLG (+63115)
chr11	48025676	48028082	OR4B1 (-211465), PTPRJ (+24766)
chr17	72732404	72742092	SLC9A3R1 (-7543), RAB37 (+4192)
chr6	159461621	159462122	EZR (-221428), TAGAP (+4312)
chr17	16890267	16894099	MPRIP (-53891), TNFRSF13B (-16781)
chr6	128272832	128273333	THEMIS (-50857), PTPRK (+568645)
chr11	117840867	117841648	TMPRSS13 (-41178), IL10RA (-15805)
chr19	47470788	47471945	NPAS1 (-51710), ARHGAP35 (+49434)
chr7	106506997	106507498	PRKAR2B (-177846), PIK3CG (+1324)
chr1	32292438	32292939	SPOCD1 (-11037), PTP4A2 (+111299)
chr2	70329991	70333689	PCBP1 (+17255), TIA1 (+143933)
chr10	14629416	14631042	FRMD4A (-257346), CDNF (+249842)
chr18	19262299	19263469	ABHD3 (+21882), SNRPD1 (+70656)
chr1	172786752	172790128	FASLG (+160282), TNFSF18 (+231663)
chr20	50021488	50022271	KCNG1 (-382214), NFATC2 (+137378)
chr2	204731153	204731853	CTLA4 (-1006)
chr3	151909609	151924310	MBNL1 (-68869), SUCNR1 (+325529)
chr8	103064386	103064887	NCALD (+72498), GRHL2 (+559977)
chr8	134057834	134091103	SLA (-1866)
chr15	63485527	63486245	APH1B (-83867), RAB8B (+4218)
chr17	10170744	10171245	GAS7 (-69127), MYH13 (+105452)
chr6	108061753	108062987	SCML4 (+83146), SOBP (+251208)
chrX	128901231	128920164	SASH3 (-3262)
chr1	117296318	117296956	CD2 (-370)
chr6	159484365	159484866	FNDC1 (-105813), TAGAP (-18432)
chr2	192070833	192071334	STAT4 (-55098), MYO1B (-39031)
chr19	47679359	47681411	SAE1 (+46265), BBC3 (+55638)
chr15	77285744	77286245	PSTPIP1 (-1431)
chr11	121320419	121320920	SORL1 (-2242)
chr1	111174613	111175114	KCNA2 (-24813), KCNA3 (+42791)
chr6	16699321	16701278	ATXN1 (+61387), GMPR (+461489)
chr8	129549065	129557723	TMEM75 (-592803)

chrX	78351674	78352175	GPR174 (-74544), P2RY10 (+151007)
chr7	38399373	38399874	STARD3NL (+181800), AMPH (+271543)
chr9	132650322	132651608	USP20 (+53216), FNBP1 (+154476)
chr8	19302336	19302837	SH2D4A (+131459), CSGALNACT1 (+157419)
chr6	56803093	56803594	DST (-295550), KIAA1586 (-108003)
chr3	63953107	63955317	PSMD6 (+55024), ATXN7 (+103979)
chr21	19165596	19167125	CHODL (-450789), BTG3 (-181199)
chr5	35859343	35859844	IL7R (+2643), CAPSL (+79287)
chr8	126648207	126652139	TRIB1 (+207610), FAM84B (+920465)
chr4	40309483	40310341	CHRNA9 (-27434), RHOH (+111385)
chr10	74086678	74087179	DNAJB12 (+27978), DDIT4 (+53251)
chr7	50347582	50349477	IKZF1 (+212)
chr2	113928945	113934800	PSD4 (+325)
chr2	173360212	173361032	PDK1 (-60157), ITGA6 (+68105)
chr11	12244857	12247030	MICALCL (-62503), MICAL2 (+113806)
chr5	39775909	39776740	PTGER4 (-903275), DAB2 (-351053)
chr5	37197191	37199020	C5orf42 (+51424), NIPBL (+321245)
chr6	20318956	20321183	MBOAT1 (-107440), E2F3 (-82328)
chr3	114010071	114010572	TIGIT (+373)
chr10	33395753	33429250	ITGB1 (-165680), NRP1 (+212688)
chr7	65760309	65760958	KCTD7 (-445009), TPST1 (+90448)
chr2	30555104	30561724	LCLAT1 (-111709), LBH (+104017)
chr2	29237027	29239404	C2orf71 (+58911), WDR43 (+120707)
chr17	7238186	7242037	ACAP1 (+264)
chr2	98328731	98337931	ZAP70 (+3308), TMEM131 (+279023)
chr15	78338845	78345380	LINGO1 (-417281), TBC1D2B (+27881)
chr8	128987336	128989016	TMEM75 (-27585)
chr3	56950039	56952371	ARHGEF3 (+162131), CCDC66 (+360004)
chr17	33373478	33374153	RFFL (+42522), LIG3 (+66303)
chr10	72361671	72363417	PRF1 (-13)
chr2	12637607	12645285	TRIB2 (-215569), LPIN1 (+823725)
chr1	12147272	12150206	TNFRSF1B (-78321), TNFRSF8 (+25305)
chr2	38893187	38895506	GALM (+1295), SRSF7 (+84289)
chr13	24823698	24830525	C1QTNF9 (-54192), SPATA13 (+273168)
chr22	27038505	27039006	CRYBA4 (+20828)
chr20	37500963	37503575	FAM83D (-52686), PPP1R16B (+67921)
chr16	28152386	28154206	GSG1L (-78466), XPO6 (+69894)
chr11	122611373	122621267	CRTAM (-92888), UBASH3B (+89937)
chr3	112388624	112398119	CCDC80 (-33256), CD200R1L (+171425)
chr8	29356670	29357432	DUSP4 (-148866), TMEM66 (+583672)
chr6	5174537	5175551	LYRM4 (+86128), PPP1R3G (+89324)
chr6	52171951	52173363	PAQR8 (-54269), MCM3 (-23022)
chr2	69875430	69875931	AAK1 (-4832)
chr16	68390534	68391035	PRMT7 (+45748), SMPD3 (+91806)
chr20	62381022	62383422	SLC2A4RG (+11008), ZBTB46 (+80345)
chr19	35696310	35696811	FAM187B (+23071), FXYS5 (+50885)
chr2	112914158	112914659	FBLN7 (+18447), ZC3H8 (+98279)
chr16	88746842	88749461	MVD (-18634), SNAI3 (+4749)
chr19	10449552	10450587	ICAM3 (+429)
chr6	139859226	139862674	CITED2 (-165193)
chr13	40779782	40781809	FOXO1 (+459938), COG6 (+550982)
chr2	192065430	192073329	STAT4 (-53394), MYO1B (-40735)
chr19	10449189	10451326	ICAM3 (+241)
chr6	20367549	20368199	MBOAT1 (-155244), E2F3 (-34524)
chr5	143565113	143572110	YIPF5 (-18389), KCTD16 (-16228)
chr1	168437139	168440735	XCL2 (+74298), TBX19 (+188659)

chr21	30451866	30453177	MAP3K7CL (-351)
chr9	100866057	100867338	TRIM14 (+14782), NANS (+47677)
chr21	35304069	35306039	MRPS6 (-140769), ATP5O (-16770)
chr11	3970072	3970573	RRM1 (-145716), STIM1 (+93391)
chr3	151957200	151966346	MBNL1 (-24056), SUCNR1 (+370342)
chr19	7414024	7414786	ENSG00000263264 (+557)
chr4	122102262	122103737	NDNF (-109327), TNIP3 (+45621)
chr11	95989176	95993871	MTMR2 (-334065), MAML2 (+84820)
chr22	38001124	38001625	GGA1 (-3107)
chr12	32038448	32054118	BICD1 (-213880), H3F3C (-101108)
chr6	25027814	25028315	LRRRC16A (-251591), FAM65B (-116870)
chr1	172626785	172633865	FASLG (+2167), TNFSF18 (+389778)
chr1	53103517	53104018	FAM159A (+4752), ECHDC2 (+283671)
chr2	235335081	235336717	ARL4C (+69798), SPP2 (+376556)
chr1	183925043	183926676	APOBEC4 (-303412), COLGALT2 (+81003)
chr17	62965408	62966073	LRRRC37A3 (-50838), GNA13 (+87216)
chr14	88471473	88472796	GPR65 (+667)
chr2	158266785	158278917	ERMN (-88626), CYTIP (+27803)
chr2	42524254	42524964	COX7A2L (+71541), EML4 (+128119)
chr2	190522649	190523366	ASNSD1 (-3138)
chr6	13687747	13688248	RANBP9 (+23798), NOL7 (+72439)
chr1	206889632	206890133	MAPKAPK2 (+31501), IL10 (+55956)
chr2	106776072	106777906	UXS1 (+33806), C2orf40 (+94877)
chr2	97628414	97628915	SEMA4C (-92957), FAHD2B (+131911)
chr1	26699144	26699793	ZNF683 (-203)
chr22	37559569	37560588	IL2RB (-14049), C1QTNF6 (+24250)
chr22	17697120	17697621	CECR5 (-57204), CECR1 (+5508)
chr2	122456522	122458761	CLASP1 (-50590), MKI67IP (+36857)
chr14	71463577	71469265	SIPA1L1 (-529621), PCNX (+92299)
chr5	118607470	118607971	TNFAIP8 (-82288)
chr5	131438081	131440256	CSF2 (+29686), P4HA2 (+124339)
chr4	101941553	101942999	EMCN (-503026), PPP3CA (+326361)
chr8	100509977	100513092	COX6C (+394755), VPS13B (+486041)
chr4	154860927	154861428	SFRP2 (-150906), DCHS2 (+451271)
chr13	51488536	51489954	SERPINE3 (-425923), RNASEH2B (+5431)
chr2	39353609	39358413	SOS1 (-7819), CDKL4 (+100662)
chr15	44975470	44976486	B2M (-27697), PATL2 (-6892)
chr16	57626078	57627652	GPR56 (-35554), GPR114 (+50264)
chr1	9688640	9690647	PIK3CD (-22159), TMEM201 (+40664)
chr7	142502051	142503604	EPHB6 (-49964), PRSS1 (+45498)
chr1	202126849	202135868	PTPN7 (-650)
chr11	13943869	13947741	FAR1 (+255588), RRAS2 (+434925)
chr21	34587697	34588198	IFNAR2 (-14331), OLIG1 (+145498)
chr12	47664503	47665004	AMIGO2 (-191106), RPAP3 (+435090)
chr20	56192502	56200138	ZBP1 (-791)
chr17	33849412	33849913	SLFN12L (-34787), SLFN14 (+35454)
chr3	71503771	71505762	FOXP1 (-324779), EIF4E3 (+269759)
chr12	9142227	9142728	KLRG1 (+341)
chr20	25071908	25072409	ENTPD6 (-104197), VSX1 (-9163)
chr20	4645257	4647210	ADRA1D (-416513), PRNP (-20648)
chr3	186626931	186627432	ST6GAL1 (-21092), ADIPOQ (+66719)
chr4	185434290	185438004	IRF2 (-40413), CASP3 (+134482)
chr3	65006279	65006780	ADAMTS9 (-332854)
chr4	40232853	40233819	CHRNA9 (-104010), RHOH (+34809)
chr9	129767260	129767761	RALGPS1 (+90458), ANGPTL2 (+117651)
chr6	37483145	37485460	CCDC167 (-16605), MDGA1 (+181463)

chr10	104059867	104060560	NFKB2 (-94140), GBF1 (+54925)
chr16	81029734	81032284	CDYL2 (-192783), CMC2 (+9710)
chr11	13950821	13951499	FAR1 (+260943), RRAS2 (+429570)
chr20	47435037	47435538	PREX1 (+9132)
chr13	46867725	46872799	LCP1 (-84779), ESD (+501105)
chr1	89736848	89737536	GBP4 (-72577), GBP5 (+1352)
chr1	25887642	25889625	MAN1C1 (-55325), LDLRAP1 (+18563)
chr19	42050144	42065104	ATP5SL (-112180), CEACAM21 (-24977)
chr1	112133228	112149695	ADORA3 (-95352), RAP1A (-20943)
chr3	32474279	32475384	CMTM7 (+41669), CMTM6 (+70068)
chr2	112945868	112946369	FBLN7 (+50157), ZC3H8 (+66569)
chr5	39213446	39213947	RICTOR (-139187), FYB (+57062)
chr4	90226529	90227167	TIGD2 (+192880), SNCA (+531442)
chr5	67196845	67197346	CD180 (-704469), PIK3R1 (-314452)
chr7	114566155	114566656	MDFIC (+4197)
chr6	33311931	33313351	KIFC1 (-46672), DAXX (-21850)
chr14	51772074	51773513	FRMD6 (-345871), TMX1 (+65908)
chr2	197121639	197136983	STK17B (-93012), HECW2 (+328024)
chr13	22633572	22638459	FGF9 (+390494)
chr4	25860794	25862387	SEL1L3 (+2990), SLC34A2 (+204125)
chr6	5830808	5833715	NRN1 (+174938), FARS2 (+570985)
chrX	19816791	19818942	MAP3K15 (-284488), SH3KBP1 (+87852)
chr18	2971100	2972839	LPIN2 (+39975), EMILIN2 (+124942)
chr19	35693779	35709585	FAM187B (+17950), FXYD5 (+56006)
chr16	84547957	84549382	TLDC1 (-10306), COTL1 (+103013)
chr2	99388111	99389937	MGAT4A (-41435), TSGA10 (+382356)
chr11	95430645	95434291	SESN3 (-468107), FAM76B (+90487)
chr2	33900	34401	FAM110C (+12234)
chr19	47457133	47459732	NPAS1 (-64644), ARHGAP35 (+36500)
chr14	91784415	91785044	GPR68 (-64461), CCDC88C (+99391)
chr11	77912832	77913465	USP35 (+13196), GAB2 (+215703)
chr13	99703885	99704635	UBAC2 (-148768), DOCK9 (-74016)
chr16	3120078	3131692	IL32 (+10500), ZSCAN10 (+16976)
chr1	151867606	151872866	THEM5 (-44063), THEM4 (+12048)
chr11	13944601	13945246	FAR1 (+254707), RRAS2 (+435806)
chr13	41349741	41353708	SLC25A15 (-11908), MRPS31 (-6416)
chr5	156339767	156342020	TIMD4 (+49372), SGCD (+587127)
chr11	13946289	13946790	FAR1 (+256323), RRAS2 (+434190)
chr3	112389248	112397485	CCDC80 (-33251), CD200R1L (+171430)
chr11	65693529	65697384	SART1 (-33703), DRAP1 (+8729)
chr10	6621064	6623000	PRKCQ (+231)
chr3	51061236	51064451	MANF (-359634), DOCK3 (+350172)
chr15	77295594	77296608	PSTPIP1 (+8675), TSPAN3 (+67469)
chr13	52398786	52400975	CCDC70 (-36236), DHRS12 (-21622)
chr12	22548781	22550645	ST8SIA1 (-62065), C2CD5 (+147767)
chr10	22938602	22939103	PIP4K2A (+64631), SPAG6 (+304454)
chr12	67876768	67877690	DYRK2 (-165272), CAND1 (+214168)
chr10	127798899	127800050	FANK1 (+214367), ADAM12 (+277549)
chr22	22120734	22121386	YPEL1 (-30937), MAPK1 (+100859)
chr19	16228794	16230348	HSH2D (-24934), RAB8A (+7132)
chr3	99418862	99420000	COL8A1 (+62112), FILIP1L (+413926)
chr16	28198021	28199458	GSG1L (-123910), XPO6 (+24450)
chr5	130587621	130589312	CDC42SE2 (-11326), LYRM7 (+81964)
chr2	95740424	95740925	MRPS5 (+47070), MAL (+49246)
chr3	43235503	43236004	SNRK (-92278), GTDC2 (-88186)
chr3	141097344	141100252	ZBTB38 (-7856), ACPL2 (+148128)

chr21	43609807	43610308	ABCG1 (-29170), UMODL1 (+118632)
chr1	117297509	117298703	PTGFRN (-154573), CD2 (+1099)
chr1	155435759	155436418	ASH1L (+96234), RUSC1 (+145371)
chr11	95449281	95449782	SESN3 (-485171), FAM76B (+73423)
chr2	8443744	8444428	ID2 (-374889)
chr17	14330011	14333866	HS3ST3B1 (+127539), PMP22 (+833967)
chr4	2281953	2285001	MXD4 (-19456), ZFYVE28 (+136913)
chr1	89775030	89777658	GBP6 (-53273), GBP5 (-37800)
chr1	207094442	207098810	FAIM3 (-1283)
chr7	151048965	151049466	NUB1 (+10419), RHEB (+167794)
chr19	17293056	17296174	USE1 (-31553), MYO9B (+108024)
chr9	134606680	134612970	RAPGEF1 (-24596), MED27 (+345470)
chr11	20052987	20054032	DBX1 (+128360), NAV2 (+318367)
chr2	69920694	69921195	AAK1 (-50096), ANXA4 (-48161)
chr5	35855454	35856090	IL7R (-1179)
chr2	106712177	106713445	C2orf40 (+30699), UXS1 (+97984)
chrX	46446245	46448133	CHST7 (+13970), SLC9A7 (+171301)
chr19	1074182	1076311	HMHA1 (+9325), POLR2E (+20351)
chr19	10252799	10254166	EIF3G (-22905), DNMT1 (+52272)
chr9	136547947	136549830	DBH (+47407), SARDH (+56153)
chr17	66339766	66346288	SLC16A6 (-55770), WIP1 (+110535)
chr16	87989996	87990795	CA5A (-20274), BANP (-13228)
chr6	30474233	30480285	PRR3 (-47404), HLA-E (+20015)
chr12	68091191	68093726	DYRK2 (+49958), IFNG (+461068)
chr1	110343182	110347598	CSF1 (-107865), EPS8L3 (-38741)
chr5	66516633	66519870	PIK3R1 (-993296), CD180 (-25625)
chr14	61807069	61813075	HIF1A (-354268), PRKCH (+21637)
chr21	36392479	36403492	RUNX1 (+23655), CLIC6 (+356298)
chr12	672745	673246	NINJ2 (+99949), B4GALNT3 (+103466)
chr5	37197930	37198431	C5orf42 (+51349), NIPBL (+321320)
chr2	233939498	233941501	ATG16L1 (-219717), INPP5D (+15311)
chr14	22857423	22858383	DAD1 (+200272), OR4E2 (+724606)
chr1	117544673	117546146	TTF2 (-57515), CD101 (+1028)
chr16	18814731	18816483	ENSG00000260342 (-2766), ARLGIP1 (-2607)
chr8	29833040	29833541	DUSP4 (-625106), TMEM66 (+107432)
chr19	8580670	8581171	ZNF414 (-1877)
chr7	36756513	36767811	AOAH (+1991), ANLN (+332747)
chr8	66854100	66869984	PDE7A (-107855), DNAJC5B (-71753)
chr15	44970033	44970534	PATL2 (-1198)
chr4	78774161	78776486	CNOT6L (-34780), MRPL1 (-8350)
chr2	175358245	175359565	GPR155 (-7097), WIPF1 (+140402)
chr6	143163127	143164593	HIVEP2 (+102478), GPR126 (+540794)
chr11	118212908	118213779	CD3G (-1727), CD3D (+115)
chr5	81608519	81609336	ATP6AP1L (+33647), TMEM167A (+764387)
chr19	30114823	30115324	PLEKHF1 (-40889), POP4 (+20150)
chr5	49888380	49889314	EMB (-151646), PARP8 (-73925)
chr10	3800069	3800951	PITRM1 (-585507), KLF6 (+26957)
chr10	127835654	127836343	ADAM12 (+241025), FANK1 (+250891)
chr13	40962006	40964968	FOXO1 (+277247), COG6 (+733673)
chr6	122204219	122204720	HSF2 (-516221), GJA1 (+447632)
chr2	238340101	238351843	MLPH (-49839), COL6A3 (-22954)
chr22	17717419	17719055	CECR2 (-238390), CECR1 (-15358)
chr18	74836671	74837172	MBP (+7803), ZNF236 (+300806)
chr17	4950396	4954089	ZFP3 (-29300), SLC52A1 (-13516)
chrX	153961606	153963263	CTAG2 (-80582), GAB3 (+16917)
chr7	142497341	142498047	EPHB6 (-55098), PRSS1 (+40364)



chr7	657257	659330	PDGFA (-99263), PRKAR1B (+94550)
chr12	104870155	104882292	CHST11 (+25473), SLC41A2 (+446209)
chr5	32531419	32532877	ZFR (-87281), SUB1 (-53457)
chr6	45891145	45891792	SUPT3H (-545799), CLIC5 (+156663)
chr8	8195478	8197159	ENSG00000182319 (+47689), ZNF705B (+395175)
chr12	29256146	29257337	FAR2 (-119856), CCDC91 (+913363)
chr8	126957485	126966056	TRIB1 (+519208), FAM84B (+608867)
chr3	33014976	33015796	CCR4 (+22320), TMPPE (+122907)
chr5	141395822	141396323	GNPDA1 (-3714)
chr2	96980458	96983837	SNRNP200 (-10895), ITPRIPL1 (-9787)
chr11	12218072	12218573	MICALCL (-90124), MICAL2 (+86185)
chrX	39713818	39715396	BCOR (+242049)
chr1	175177758	175178259	TNN (+141015), TNR (+534897)
chr11	128194172	128194969	ETS1 (+262866)
chr9	126084675	126085622	STRBP (-54294), CRB2 (-33390)
chr5	39173027	39220833	RICTOR (-122420), FYB (+73829)
chr6	111549510	111550011	KIAA1919 (-30790), SLC16A10 (+140980)
chr5	75973702	75974988	F2RL2 (-55086), F2R (-37523)
chr17	16170107	16172747	PIGL (+50903), CENPV (+85386)
chr5	54332974	54333602	GZMA (-65188), GZMK (+13207)
chr1	40844746	40847547	ZFP69B (-69632), SMAP2 (+6778)
chr12	68091990	68093152	DYRK2 (+50070), IFNG (+460956)
chr20	62265922	62267267	GMEB2 (-15366), STMN3 (+18185)
chr17	4388865	4390340	SPNS2 (-12530), SPNS3 (+52620)
chr2	235196873	235205951	ARL4C (+204285), SPP2 (+242069)
chr16	16126808	16127309	ABCC1 (+83625), ABCC6 (+190262)
chr15	22445614	22453931	TUBGCP5 (-383622), OR4N4 (+67391)
chr2	97009422	97010071	ARID5A (-192739), NCAPH (+8222)
chr11	48034201	48035374	OR4B1 (-203556), PTPRJ (+32675)
chr2	198170484	198173450	PGAP1 (-380512), ANKRD44 (+3544)
chr15	55559043	55560006	RSL24D1 (-70260), RAB27A (+3067)
chr2	143886083	143886584	ARHGAP15 (-549)
chr2	231305297	231307076	CAB39 (-271373), SP100 (+25206)
chr21	32554551	32555052	KRTAP19-8 (-144007), TIAM1 (+376488)
chr11	45122473	45125265	TP53I11 (-152158), PRDM11 (-45025)
chr20	47332942	47333841	SULF2 (-918062), PREX1 (+111028)
chr3	128508122	128508623	ACAD9 (-90081), RAB7A (+63408)
chr7	102056151	102056652	ORAI2 (-17594), PRKRIP1 (+52058)
chr14	52313261	52314177	GNG2 (-13413), FRMD6 (+195054)
chr16	4555584	4556245	NMRAL1 (-29608), CDIP1 (+9195)
chr16	11404509	11405142	RMI2 (-34462), PRM1 (-29619)
chr6	130068175	130073415	ARHGAP18 (-39425), TMEM244 (+111897)
chr16	53489755	53492488	RBL2 (+22790), AKTIP (+46041)
chr5	176839590	176840091	F12 (-3264)
chr2	144281607	144284138	ARHGAP15 (+395990), GTDC1 (+769187)
chr15	38943467	38944498	THBS1 (-929311), RASGRP1 (-86976)
chr22	27054632	27055133	CRYBA4 (+36955)
chr12	47600678	47601179	AMIGO2 (-127281), RPAP3 (+498915)
chr5	39208697	39209198	RICTOR (-134438), FYB (+61811)
chr11	48039222	48039723	OR4B1 (-198871), PTPRJ (+37360)
chr6	35276633	35282969	PPARD (-30590), DEF6 (+14172)
chr17	75336707	75339513	TNRC6C (-663027), SEPT9 (+60618)
chr17	55676877	55677638	ENSG00000166329 (+145415), MSI2 (+343363)
chr1	101575652	101578984	S1PR1 (-125126), DPH5 (-85990)
chr1	90076103	90076604	LRR8C (-22277), LRR8B (+85892)
chr3	46007553	46008269	CXCR6 (+21400), FYCO1 (+29396)

chr17	8845326	8845827	PIK3R6 (-74583), PIK3R5 (+23447)
chr14	90184634	90192312	FOXN3 (-102999), EFCAB11 (+232560)
chr12	89820641	89822471	DUSP6 (-74508), GALNT4 (+97027)
chr12	92792911	92793412	BTG1 (-253489), CLLU1 (-24573)
chr21	47978970	47979848	S100B (+45712), DIP2A (+100385)
chr22	40685578	40686242	ADSL (-56597), TNRC6B (+111981)
chr14	98647084	98659551	NONE
chr2	216922170	216922892	MREG (-44185), PECR (+24008)
chr12	75872419	75876764	GLIPR1 (+132)
chr3	16332275	16332938	OXNAD1 (+25901), RFTN1 (+222606)
chrX	1653183	1657697	P2RY8 (+560)
chr6	149475435	149475936	TAB2 (-166502), UST (+407222)
chr1	117307482	117307983	PTGFRN (-144946), CD2 (+10726)
chr22	24548939	24550337	SUSD2 (-27589), CABIN1 (+141770)
chr2	42332412	42334799	EML4 (-62884), PKDCC (+58446)
chr3	50611254	50612498	HEMK1 (+5248), CISH (+37327)
chr10	6388162	6393184	PFKFB3 (+145779), PRKCQ (+231590)
chr7	8164568	8165578	ICA1 (+136838), GLCCI1 (+156648)
chr20	9221385	9221886	PLCB4 (-66811)
chr19	36443163	36446756	SDHAF1 (-41130), LRFN3 (+18508)
chr14	66311903	66318377	GPHN (-658985), FUT8 (+437830)
chr9	129229031	129238583	LMX1B (-142915), MVB12B (+144679)
chr1	10569945	10572539	PEX14 (+36298), CASZ1 (+285463)
chr1	59184027	59185536	MYSM1 (-19018), JUN (+65003)
chr6	154570378	154571017	IPCEF1 (+80517), OPRM1 (+239062)
chr16	28994606	29001991	LAT (+2152), NPIPB11 (+417051)
chr6	4732792	4735719	ECI2 (-598425), CDYL (-42413)
chr6	47044236	47044737	GPR110 (-34388), TNFRSF21 (+233154)
chr8	29847294	29849464	DUSP4 (-640194), TMEM66 (+92344)
chr1	90187177	90187814	LRR8D (-99095), LRR8C (+88865)
chr1	239882577	239883078	FMN2 (-372352), CHR3 (+90455)
chr2	216616377	216616878	FN1 (-315733), MREG (+261718)
chrX	13069405	13069906	FAM9C (-6935), ATXN3L (+268862)
chr2	97260776	97261277	KANSL3 (+43019), ARID5A (+58541)
chr1	22345111	22346587	CDC42 (-33312), CELA3A (+17700)
chr6	46292669	46294259	ENPP5 (-154756), RCAN2 (+165635)
chr9	92023754	92024453	SEMA4D (+9644), SECISBP2 (+90683)
chr19	15625494	15626398	CYP4F3 (-125763), CYP4F22 (+6642)
chr5	49890167	49890668	EMB (-153217), PARP8 (-72354)
chr1	117057506	117058627	CD58 (+55594), ATP1A1 (+141578)
chr17	66179057	66179558	AMZ2 (-64407), KPNA2 (+147232)
chr1	54231054	54233929	GLIS1 (-32615), NDC1 (+72041)
chr13	30944080	30954087	KATNAL1 (-67463), HMGB1 (+242650)
chr2	175703978	175713270	CHRNA1 (-79435), CHN1 (+161330)
chr14	23018339	23020276	DAD1 (+38867), OR4E2 (+886011)
chr11	117856418	117860816	TMPRSS4 (-89187), IL10RA (+1554)
chr12	9825849	9827137	CLEC2D (+4184), CLECL1 (+59402)
chr12	9516561	9517202	PZP (-155916), KLRB1 (+243600)
chr14	99397497	99399088	BCL11B (+339272)
chr1	9710618	9716680	PIK3CD (+1846), CLSTN1 (+170935)
chr3	98282799	98283451	CPOX (+29442), GPR15 (+32382)
chr2	198160690	198161529	PGAP1 (-369655), ANKRD44 (+14401)
chr9	116279360	116280893	ZNF618 (-358435), RGS3 (+73116)
chr9	31346877	31347882	NONE
chr16	3625185	3631587	SLX4 (+33213), CLUAP1 (+77462)
chr20	35274138	35274639	SLA2 (+230)

chr16	87533217	87533718	JPH3 (-103043), ZCCHC14 (-7817)
chr1	167595787	167607716	MPZL1 (-89435), RCSD1 (+2422)
chr11	132228092	132228593	NTM (+446987), OPCML (+585223)
chr8	23890611	23891112	ADAM28 (-260691), STC1 (-178542)
chr4	40206394	40206895	CHRNA9 (-130701), RHOH (+8118)
chr7	18547862	18549397	HDAC9 (+12704), TWIST1 (+608665)
chr8	126933006	126948771	TRIB1 (+498326), FAM84B (+629749)
chr14	23032417	23034145	DAD1 (+24894), OR4E2 (+899984)
chr20	50017142	50017643	KCNG1 (-377727), NFATC2 (+141865)
chr7	8173828	8174329	ICA1 (+127832), GLCCI1 (+165654)
chr1	185408248	185409260	HMCN1 (-294929), IVNS1ABP (-122293)
chr6	143223440	143224690	HIVEP2 (+42273), GPR126 (+600999)
chr14	53573890	53577548	FERMT2 (-157904), DDHD1 (+44097)
chr12	92424055	92427545	DCN (-848900), BTG1 (+113873)
chr2	197041716	197042217	STK17B (-5668), HECW2 (+415368)
chr19	15571919	15579302	RASAL3 (-234)
chr6	122078191	122078895	HSF2 (-642148), GJA1 (+321705)
chr1	89663546	89665118	GBP4 (+283)
chr17	29647131	29647632	EVI2B (-6252), EVI2A (+1385)
chr12	110516863	110518176	IFT81 (-44662), C12orf76 (-12020)
chr3	52286885	52288492	PPM1M (+7464), WDR82 (+24970)
chr17	33546183	33547257	SLC35G3 (-25308), SLFN5 (-23335)
chr7	17273361	17275296	AGR3 (-352718), AHR (-63917)
chr5	171672554	171673055	UBTD2 (+38270), EFCAB9 (+51629)
chr8	136225004	136226187	ZFAT (-500315), KHDRBS3 (-244104)
chr20	31119677	31132027	ASXL1 (+179697), COMMD7 (+205951)
chr4	90220340	90220982	TIGD2 (+186693), SNCA (+537629)
chr2	198063319	198065309	PGAP1 (-272859), ANKRD44 (+111197)
chr10	63926624	63927125	RTKN2 (+101591), ARID5B (+265816)
chrX	128914558	128915059	SASH3 (+849)
chr12	58931362	58932261	LRIG3 (+382491), XRCC6BP1 (+596452)
chr10	4011199	4016909	AKR1E2 (-854392), KLF6 (-186587)
chrX	135862596	135864454	ARHGEF6 (+722)
chr6	136200282	136203366	PDE7B (+28990), MTFR2 (+369625)
chr17	49106289	49108084	TOB1 (-163481), SPAG9 (+91039)
chr1	111190143	111190644	KCNA2 (-40343), KCNA3 (+27261)
chr2	98329073	98330911	ZAP70 (-31)
chr1	12127902	12128403	TNFRSF1B (-98907), TNFRSF8 (+4719)
chr5	176784152	176785840	RGS14 (+158)
chr7	39628655	39633451	RALA (-32029), POU6F2 (+613455)
chr4	57621696	57625737	HOPX (-75845), SPINK2 (+64191)
chr10	32701970	32702471	EPC1 (-66108), ITGB1 (+544601)
chr7	106356176	106361973	NAMPT (-433437), PIK3CG (-146849)
chr14	91707512	91712142	GPR68 (+10442), C14orf159 (+129113)
chr3	46148996	46149692	XCR1 (-80110), CCR1 (+100543)
chr2	8612552	8613053	ID2 (-206172)
chr1	33264004	33264505	SYNC (-95535), S100BPB (-18901)
chr11	118214800	118215472	CD3D (-1677), CD3G (+65)
chr20	37498457	37506686	FAM83D (-52383), PPP1R16B (+68224)
chr7	7196804	7197964	CCZ1B (-330983), C1GALT1 (-24862)
chr6	169487100	169488224	THBS2 (+166477), SMOC2 (+645831)
chr19	35488418	35489060	GRAMD1A (-2452)
chr6	144669912	144673492	UTRN (+58737)
chr1	108370910	108371411	VAV3 (+136605), NTNG1 (+687719)
chr3	54906997	54917670	LRTM1 (+49767), CACNA2D3 (+755641)
chr12	111043064	111044277	PPTC7 (-22546), TCTN1 (-8298)

chr6	153489298	153489953	RGS17 (-124448), ENSG00000213121 (-62829)
chr7	106504881	106505570	PIK3CG (-698)
chr1	109188834	109190433	HENMT1 (+14514), NBPFF6 (+271213)
chr3	186626121	186628069	ST6GAL1 (-21179), ADIPOQ (+66632)
chr1	54121594	54122909	GLIS1 (+77625), DMRTB1 (+197180)
chr9	132032436	132034561	NTMT1 (-337664), PPP2R4 (+159902)
chr5	130545599	130546100	CDC42SE2 (-53943), LYRM7 (+39347)
chr16	68031287	68036341	DPEP2 (+675)
chr7	37382052	37382803	AOAH (-618275), ELMO1 (+106424)
chrX	64916751	64919057	MSN (+30367), VSIG4 (+342045)
chr4	169614242	169615870	PALLD (+196801), CBR4 (+316353)
chr10	5631261	5632904	CALML3 (+65159), ASB13 (+76458)
chr20	35272366	35272867	SLA2 (+2002), C20orf24 (+38392)
chr14	100544724	100546062	EVL (+13778), DEGS2 (+81107)
chr10	121464307	121464808	INPP5F (-21051), BAG3 (+53676)
chrX	130946233	130948010	ENSG00000134602 (-210171), OR13H1 (+269172)
chr11	60809176	60809990	CD5 (-60284), CD6 (+70431)
chr3	51062857	51063492	MANF (-359303), DOCK3 (+350503)
chr2	132441922	132442423	GPR39 (-731974), MZT2A (-192178)
chr14	22538883	22539384	OR4E2 (+405837), DAD1 (+519041)
chrX	13141281	13142437	FAM9C (-79138), ATXN3L (+196659)
chr22	18260038	18260817	BID (-3646)
chr2	158756283	158756976	PKP4 (-556994), UPP2 (+23416)
chr3	27399072	27402772	NEK10 (+9990), LRRC3B (+736625)
chr2	196396671	196399347	SLC39A10 (-123462)
chr8	33410742	33413599	RNF122 (+12472), MAK16 (+69903)
chr13	41930948	41931449	RGCC (-100496), NAA16 (+45858)
chr20	1649320	1658244	SIRPA (-222160), SIRPG (-15357)
chr19	54899661	54900576	TTYH1 (-26581), LAIR1 (-23555)
chr1	26613296	26617940	CD52 (-28830), SH3BGRL3 (+9951)
chr10	27025729	27029300	PDSS1 (+40927), ABI1 (+122349)
chr1	172665293	172675386	FASLG (+42182), TNFSF18 (+349763)
chr14	20943701	20947258	RNASE10 (-33132), PNP (+7942)
chr1	111186002	111186503	KCNA2 (-36202), KCNA3 (+31402)
chr6	31548443	31550815	LTB (+573)
chr8	126962632	126963133	TRIB1 (+520320), FAM84B (+607755)
chr6	159141943	159142444	SYTL3 (+59843), EZR (+98250)
chr2	160853712	160854764	LY75-CD302 (-93017), PLA2R1 (+64883)
chr3	188848425	188851836	TPRG1 (-39632), LPP (+919410)
chr11	85827610	85828245	EED (-127658), PICALM (-47957)
chr1	160598771	160599721	CD84 (-49952), SLAMF1 (+17839)
chr11	116719957	116727988	APOA1 (-15307), SIK3 (+245020)
chr20	46417632	46418133	SULF2 (-2553)
chr2	175708206	175709273	CHRNA1 (-79551), CHN1 (+161214)
chr1	159037143	159037644	AIM2 (+9297), IFI16 (+57712)
chr7	105489719	105490220	EFCAB10 (-268027), CDHR3 (-113715)
chr2	10470778	10471789	HPCAL1 (+27458), ODC1 (+117346)
chr17	46519420	46519921	SKAP1 (-12119), HOXB1 (+88688)
chr19	40445123	40451514	PSMC4 (-28593), FCGBP (-7786)
chr2	197132863	197133364	STK17B (-96815), HECW2 (+324221)
chr5	169689249	169689987	LCP2 (+35613), FOXI1 (+156717)
chrX	153232894	153233395	TMEM187 (-4633), HCFC1 (+4113)
chr5	109193791	109194292	MAN2A1 (+168975), TMEM232 (+868324)
chr18	72706877	72707891	ZADH2 (+213919), ZNF407 (+364408)
chr6	106562519	106563269	PRDM1 (+28699), ATG5 (+210772)
chr11	118746640	118747508	DDX6 (-85229), CXCR5 (-7401)

chr17	35447119	35447774	C17orf78 (-285538), AATF (+141272)
chr5	169720515	169721016	LCP2 (+4465), FOXI1 (+187865)
chr12	782405	783276	WNK1 (-79248), NINJ2 (-9896)
chr1	89751333	89753516	GBP6 (-77192), GBP5 (-13881)
chr16	30479855	30489404	ITGAL (+651)
chr16	89181874	89182573	CDH15 (-55951), ACSF3 (+22007)
chr2	68996618	68999428	ARHGAP25 (+36056), BMP10 (+100626)
chr13	99947982	99948483	GPR18 (-34235), GPR183 (+11426)
chr2	197065316	197065996	STK17B (-29357), HECW2 (+391679)
chr12	9178255	9178756	KLRG1 (+36369), A2M (+90247)
chr10	8286618	8287119	GATA3 (+190213)
chr7	150364920	150365421	GIMAP6 (-35698), GIMAP2 (-17617)
chr1	151129391	151129892	TNFAIP8L2 (+537)
chr1	214600997	214602001	PTPN14 (+123067), SMYD2 (+146923)
chr12	47753871	47755739	AMIGO2 (-281157), RPAP3 (+345039)
chr9	92079067	92079568	GADD45G (-140610), SEMA4D (-45570)
chr14	53208818	53210023	STYX (+12521), GNPAT1 (+48898)
chr7	962161	964712	ADAP1 (+30896), GET4 (+47248)
chr3	151914839	151919384	MBNL1 (-68717), SUCNR1 (+325681)
chr1	84607835	84613376	PRKACB (+652)
chr9	101814091	101824288	TGFBR1 (-48181), COL15A1 (+113269)
chr14	35133986	35136967	SNX6 (-36088), CFL2 (+47557)
chr7	43697330	43700542	BLVRA (-99350), COA1 (-9041)
chr9	15299248	15300624	FREM1 (-388943), SNAPC3 (-122766)
chr10	64000422	64004302	RTKN2 (+26104), ARID5B (+341303)
chr10	30818019	30818937	MAP3K8 (+95612), LYZL2 (+100213)
chr15	77471615	77472374	TSPAN3 (-108425), ENSG00000173517 (+240491)
chr2	197124997	197125498	STK17B (-88949), HECW2 (+332087)
chr9	95725589	95728335	SUSD3 (-94027), FGD3 (+17229)
chr12	89821846	89822347	DUSP6 (-75049), GALNT4 (+96486)
chr7	17678693	17679702	SNX13 (+300919), AHR (+340952)
chr6	137108592	137110431	MAP7 (-261902), MAP3K5 (+4144)
chr22	23161761	23163389	IGLL5 (-67385), GGTL2 (+173759)
chr1	172628278	172628911	FASLG (+437)
chr8	19576183	19577614	CSGALNACT1 (-116893), INTS10 (-97752)
chr8	125283267	125284412	TMEM65 (+101093), FER1L6 (+419613)
chr10	134194534	134196231	INPP5A (-155941), STK32C (-73939)
chr2	37849120	37855542	CDC42EP3 (+47003), QPCT (+280614)
chr14	23022330	23031622	DAD1 (+31199), OR4E2 (+893679)
chr17	72462013	72464158	CD300A (+531)
chr2	182168705	182179811	ITGA4 (-147694), UBE2E3 (+328925)
chr10	6516191	6516692	PRKCQ (+105821), PFKFB3 (+271548)
chr1	159059545	159062808	CADM3 (-80222), AIM2 (-14486)
chr10	81079772	81085129	PPIF (-24783), ZMIZ1 (+253659)
chr11	85848868	85856844	EED (-102730), PICALM (-72885)
chr11	67176836	67177464	CARNS1 (-6407), TBC1D10C (+5738)
chr10	33404734	33407827	ITGB1 (-159459), NRP1 (+218909)
chr9	130788582	130789831	DPM2 (-88444), NAIF1 (+40393)
chr17	30828436	30834291	CDK5R1 (+17727), MYO1D (+372831)
chr2	197074734	197077541	STK17B (-39839), HECW2 (+381197)
chr1	159792146	159800666	SLAMF8 (-134)
chr11	128478903	128484080	FLI1 (-82398), ETS1 (-24055)
chr8	130982633	130987614	FAM49B (-33046), ASAP1 (+429093)
chr19	49838153	49839389	CD37 (+114)
chr12	90256364	90258575	ATP2B1 (-154862)
chr6	139861298	139862041	CITED2 (-165913)

chr12	9140405	9140906	KLRG1 (-1481)
chr14	55799187	55799962	DLGAP5 (-141179), ATG14 (+79001)
chr6	25053538	25055164	LRRRC16A (-225305), FAM65B (-143156)
chr1	185536527	185537159	IVNS1ABP (-250382), HMCN1 (-166840)
chr11	1871855	1875813	LSP1 (-12561), TNNI2 (+13123)
chr6	159224801	159225910	EZR (+15088), SYTL3 (+143005)
chr11	6423458	6423959	SMPD1 (+12048), APBB1 (+16591)
chr20	3400077	3402027	SLC4A11 (-182240), ATRN (-50635)
chr3	32465726	32466227	CMTM7 (+32814), CMTM6 (+78923)
chr7	150260044	150268124	GIMAP4 (-281)
chr10	62578624	62579125	CDK1 (+40663), RHOBTB1 (+125130)
chr20	56545343	56545997	PMEP A1 (-260712), PPP4R1L (+338825)
chr10	7519616	7528686	SFMBT2 (-72848), ITIH5 (+184783)
chr12	118797200	118797701	TAOK3 (+13299), PEBP1 (+223788)
chr13	30510104	30510605	UBL3 (-85534), KATNAL1 (+371266)
chr5	127149206	127150564	SLC12A2 (-269573), CTXN3 (+165149)
chr18	10073558	10074059	APCDD1 (-380816), VAPA (+159750)
chr20	25304360	25304861	ABHD12 (+67008), PYGB (+75906)
chr3	132286988	132287489	ACKR4 (-28842), DNAJC13 (+150869)
chr2	68992856	68995722	ARHGAP25 (+32322), BMP10 (+104360)
chr15	58764786	58765977	LIPC (+62614), ADAM10 (+276795)
chr3	32499080	32500432	CMTM6 (+45144), CMTM7 (+66593)
chr5	75842283	75844758	F2RL2 (+75738), IQGAP2 (+144447)
chr12	47609519	47610780	AMIGO2 (-136502), RPAP3 (+489694)
chr5	77881596	77883429	LHFPL2 (+62135), SCAMP1 (+226174)
chr20	35602837	35603338	SAMHD1 (-22842), RBL1 (+121310)
chr2	222382106	222383891	EPHA4 (+54011)
chr1	12221308	12222877	TNFRSF1B (-4967)
chr12	58135419	58136487	AGAP2 (-3924), TSPAN31 (-2711)
chr1	11025837	11026513	CASZ1 (-169470), TARDBP (-46524)
chr14	64226151	64226947	SYNE2 (-93134), SGPP1 (-31792)
chr9	79229732	79230588	GCNT1 (+173578), PRUNE2 (+290843)
chr1	26641483	26641984	CD52 (-2714)
chr18	2588682	2590761	SMCHD1 (-66015), NDC80 (+18212)
chr10	44311877	44312378	ZNF32 (-167976), CXCL12 (+568369)
chr21	16047260	16050891	SAMSN1 (-93353), NRIP1 (+388245)
chr14	90146685	90149202	FOXN3 (-62470), EFCAB11 (+273089)
chr11	128603322	128604264	FLI1 (+39903), KCNJ1 (+108636)
chr12	122224520	122228880	RHOF (+5468), TMEM120B (+75999)
chr16	14603787	14605242	PARN (+119609), MKL2 (+431370)
chr7	30765749	30768446	CRHR2 (-27379), INMT (-24653)
chr9	75054554	75062095	TMC1 (-78392), ZFAND5 (-78162)
chr12	4003870	4008658	CCND2 (-376674), PARP11 (-23724)
chr6	170019191	170020736	THBS2 (-365825), C6orf120 (-82293)
chr13	76859400	76860223	LMO7 (+525015), KCTD12 (+600713)
chr7	42791698	42795097	GLI3 (-516786), ENSG00000256646 (+178375)
chr1	161708004	161711605	DUSP12 (-9755), FCRLB (+18452)
chr20	11123646	11124687	JAG1 (-469473)
chr10	30794255	30795116	MAP3K8 (+71820), LYZL2 (+124005)
chr1	121257136	121262351	FCGR1B (-323807)
chr1	172632226	172632727	FASLG (+4319), TNFSF18 (+387626)
chr15	39916126	39918203	THBS1 (+43871), GPR176 (+295928)
chr18	28778560	28779061	DSG1 (-119241), DSC1 (-35992)
chr13	24827786	24829054	C1QTNF9 (-52884), SPATA13 (+274476)
chr10	20912388	20913525	NEBL (+273574), PLXDC2 (+807789)
chr13	30947579	30948080	KATNAL1 (-66209), HMGB1 (+243904)

chr22	39493276	39493903	APOBEC3H (+310)
chr17	77969611	77972598	CBX4 (-157877), TBC1D16 (+38542)
chr1	185308119	185308620	HMCN1 (-395313), IVNS1ABP (-21909)
chr1	26644172	26646140	UBXN11 (-302), CD52 (+708)
chr3	16343425	16345331	OXNAD1 (+37672), RFTN1 (+210835)
chr1	198651065	198653162	PTPRC (+43944)
chr14	91880955	91884180	GPR68 (-162299), CCDC88C (+1553)
chr17	37246090	37257067	PLXDC1 (+56323), LASP1 (+225467)
chr10	127930809	127932484	ADAM12 (+145377), FANK1 (+346539)
chr13	37798968	37800737	CSNK1A1L (-120050), POSTN (+373128)
chr15	41036099	41037070	RMDN3 (+11464), RAD51 (+49213)
chr1	111415204	111415880	CD53 (-234)
chr2	85071941	85074628	TRABD2A (+35084), DNAH6 (+329706)
chr11	118186180	118187431	CD3E (+11546), CD3D (+26653)
chr9	117689447	117693995	TNFSF8 (+976)
chr2	68967175	68967841	ARHGAP25 (+5541), BMP10 (+131141)
chrX	9307448	9311441	FAM9B (-307277), TBL1X (-123603)
chr14	100533068	100536429	EVL (+3134), DEGS2 (+91751)
chr1	90182852	90192017	LRR8D (-99156), LRR8C (+88804)
chr9	18360171	18360672	ADAMTSL1 (-113470), SH3GL2 (+781301)
chr22	37637005	37640360	SSTR3 (-30321), RAC2 (+1627)
chr7	150125550	150126222	GIMAP8 (-21832), ZNF775 (+49462)
chr2	37809545	37813942	CDC42EP3 (+87590), QPCT (+240027)
chr5	156535129	156535901	HAVCR1 (-50028), HAVCR2 (+1210)
chr2	70330605	70332141	PCBP1 (+16788), TIA1 (+144400)
chr2	64926131	64927874	SLC1A4 (-289532), SERTAD2 (-45956)
chr10	11187250	11187751	CELF2 (+127608), USP6NL (+386773)
chr20	35636634	35637135	SAMHD1 (-56639), RBL1 (+87513)
chr18	53536252	53537021	TCF4 (-233452), TXNL1 (+769239)
chr18	7204666	7205461	PTPRM (-361716), LAMA1 (-87251)
chr2	68968849	68969350	ARHGAP25 (+7133), BMP10 (+129549)
chr16	55149891	55151236	IRX6 (-207108), IRX5 (+185790)
chr2	121044735	121045476	INHBB (-58613), RALB (+34772)
chr10	70803731	70806455	SRGN (-42781), KIAA1279 (+56606)
chr1	22978459	22978960	C1QB (-972)
chr3	46150305	46151294	XCR1 (-81566), CCR1 (+99087)
chr13	43564100	43569134	DNAJC15 (-30722), TNFSF11 (+418328)
chr22	17696571	17703054	CECR5 (-59646), CECR1 (+3066)
chr1	170173600	170174446	GORAB (-327247), METTL11B (+58881)
chr2	68592258	68592759	PLEK (+204)
chr7	3129182	3136604	SDK1 (-208187), CARD11 (-49314)
chr3	46408905	46417720	ACKR5 (-35736), CCR5 (+1680)
chr1	9486581	9487482	SLC25A33 (-112509), SPSB1 (+134093)
chr3	195910246	195910747	TFRC (-101437), ZDHHC19 (+27769)
chr19	9967241	9970172	PIN1 (+22708), OLFM2 (+78521)
chr3	152936518	152942323	ARHGEF26 (-899371), RAP2B (+59392)
chrX	1655321	1656376	P2RY8 (+151)
chr2	162022207	162023500	PSMD14 (-141695), TANK (+6046)
chr21	36406263	36427151	RUNX1 (+4934), CLIC6 (+375019)
chr9	129230274	129237609	LMX1B (-142780), MVB12B (+144814)
chr3	151961600	151962236	MBNL1 (-23911), SUCNR1 (+370487)
chr11	117877390	117880215	TMPPRS4 (-69001), IL10RA (+21740)
chr2	30559575	30560569	LCLAT1 (-110051), LBH (+105675)
chr7	30388158	30388812	ZNRF2 (+64562), NOD1 (+129911)
chr1	228667152	228667653	RNF187 (-7359), HIST3H2BB (+21595)
chr8	136223642	136224412	ZFAT (-498746), KHDRBS3 (-245673)

chr2	134988544	134994850	MGAT5 (+113944), TMEM163 (+484873)
chr19	6655110	6655611	CD70 (-64198), TNFSF14 (+15238)
chr11	12009598	12010245	DKK3 (+20707), USP47 (+146952)
chr15	42228997	42230052	SPTBN5 (-43250), EHD4 (+35251)
chr1	98852323	98855930	DPYD (-467548), SNX7 (-273152)
chr19	6576545	6577387	CD70 (+14197), TNFSF9 (+45956)
chr9	134143574	134147585	PPAPDC3 (-19501), NUP214 (+144632)
chr14	51278927	51280208	SAV1 (-144519), NIN (+18271)
chr22	40858473	40859587	SGSM3 (+92415), MKL1 (+173659)
chrX	128893356	128894515	SASH3 (-20024), XPNPEP2 (+20938)
chr13	101959056	101959557	TMTC4 (-632258), NALCN (+109399)
chr8	127510985	127514295	FAM84B (+57998)
chr1	160510255	160511141	SLAMF6 (-17655), CD84 (+38596)
chr18	68003102	68004600	SOCS6 (+47714), GTSR1 (+314129)
chr9	67301304	67302155	ANKRD20A1 (-625031)
chr15	33148551	33149679	GREM1 (+138940), FMN1 (+210970)
chr3	186759226	186760482	RPL39L (+97457), ST6GAL1 (+111580)
chr9	140021522	140022215	DPP7 (-12699), GRIN1 (-12064)
chr14	90188134	90188870	FOXN3 (-103028), EFCAB11 (+232531)
chr3	56813889	56826875	CCDC66 (+229181), ARHGFE3 (+292954)
chr19	8632495	8632996	ZNF414 (-53702), MYO1F (+9715)
chr5	121465246	121465747	ZNF474 (+289)
chr7	50343764	50346681	IKZF1 (-3095)
chr7	150361703	150362204	GIMAP6 (-32481), GIMAP2 (-20834)
chr13	50940042	50940543	RNASEH2B (-543521), DLEU1 (+283986)
chr3	23803964	23805131	UBE2E1 (-42846), UBE2E2 (+559764)
chr8	59517338	59517839	SDCBP (+51861), NSMAF (+54504)
chr17	75662622	75663123	TNRC6C (-338264), SEPT9 (+385381)
chr6	25035373	25036171	LRR16A (-243884), FAM65B (-124577)
chr16	57643415	57643916	GPR56 (-18753), GPR114 (+67065)
chr2	28276111	28276612	FOSL2 (-339363), RBKS (-162397)
chr14	23035089	23035590	DAD1 (+22835), OR4E2 (+902043)
chr13	101480039	101480540	TMTC4 (-153241), NALCN (+588416)
chr1	200123645	200124290	NR5A2 (+127238), ZNF281 (+255216)
chr11	72864320	72865168	P2RY2 (-64600), FCHSD2 (-11438)
chr10	3783661	3784642	PITRM1 (-569149), KLF6 (+43315)
chr12	51723199	51723700	BIN2 (-5502), CELA1 (+17013)
chr2	216581650	216583895	FN1 (-281878), MREG (+295573)
chr2	189850814	189852096	COL3A1 (+12409), COL5A2 (+193150)
chr6	25041084	25042691	LRR16A (-237768), FAM65B (-130693)
chr12	121471310	121471811	OASL (+5484), HNF1A (+55215)
chr14	20944626	20946940	RNASE10 (-32829), PNP (+8245)
chr14	35134138	35136206	SNX6 (-35783), CFL2 (+47862)
chr3	31503169	31503930	GADL1 (-567293), STT3B (-70732)
chr6	167454517	167455018	CCR6 (-81489), FGFR1OP (+42098)
chr12	68871037	68878201	MDM1 (-148507), RAP1B (-130000)
chr11	129118757	129120358	BARX2 (-126277), ARHGAP32 (-57465)
chr12	51709879	51724361	BIN2 (+828)
chr4	126188374	126189068	FAT4 (-48833)
chr2	85060003	85061161	TRABD2A (+47787), DNAH6 (+317003)
chr20	19792941	19798150	RIN2 (-71619), SLC24A3 (+602256)
chr3	139024880	139030320	COPB2 (+80974), MRPS22 (+302952)
chr2	234176788	234177289	SAG (-39428), ATG16L1 (+16822)
chr1	145743980	145744481	PDZK1 (+968)
chr1	233057937	233059362	NTPCR (-27720), MAP10 (+118007)
chr1	202132302	202132803	PTPN7 (-1844)



chr7	102066197	102067625	ORAI2 (-7085), PRKRIP1 (+62567)
chr19	19709998	19710499	PBX4 (+19476), CILP2 (+61192)
chr10	11218318	11218819	CELF2 (+158676), USP6NL (+355705)
chr8	61839281	61840828	CLVS1 (-360459), CHD7 (+248718)
chr21	36413341	36415795	RUNX1 (+7073), CLIC6 (+372880)
chr15	68172322	68172951	PIAS1 (-173880), SKOR1 (+60595)
chr9	130539505	130542005	SH2D3C (+265)
chr9	444782	449138	KANK1 (-23331), DOCK8 (+232095)
chr9	86910074	86913355	SLC28A3 (+43883), RMI1 (+316002)
chr2	231508771	231509596	CAB39 (-68376), SP100 (+228203)
chr7	50298662	50311471	IKZF1 (-43251), C7orf72 (+169435)
chr2	64954026	64954527	SLC1A4 (-262258), SERTAD2 (-73230)
chr3	9322010	9322511	THUMPDP3 (-82475), SRGAP3 (-31198)
chr15	55543051	55543832	RSL24D1 (-54177), RAB27A (+19150)
chr17	34227655	34228156	CCL5 (-20394), RDM1 (+29871)
chr5	66511138	66513599	PIK3R1 (-999179), CD180 (-19742)
chr7	40508504	40510155	C7orf10 (+334755)
chr7	138779778	138780811	KIAA1549 (-114231), ZC3HAV1 (+14099)
chr1	183561991	183562492	NCF2 (-2526)
chr1	198589387	198590610	ATP6V1G3 (-79924), PTPRC (-18171)
chr13	38169996	38173317	CSNK1A1L (-491854), POSTN (+1324)
chr15	77280445	77281815	PSTPIP1 (-6296), RCN2 (+57170)
chr7	30386904	30387545	ZNRF2 (+63302), NOD1 (+131171)
chr7	90793834	90794881	FZD1 (-99425), CDK14 (+455646)
chr16	50717484	50720271	SNX20 (-3615)
chr17	39462390	39467281	KRTAP16-1 (+669)
chr2	175497432	175501865	WIPF1 (-342)
chr1	40807069	40808358	SMAP2 (-31655), COL9A2 (-24748)
chr4	38336857	38337358	KLF3 (-328709), PTTG2 (+375052)
chr21	43480044	43485545	ZBTB21 (-52329), UMODL1 (-8631)
chr12	6897864	6902251	GPR162 (-30653), CD4 (+1420)
chr18	33737348	33738193	MOCOS (-29711), ELP2 (+27910)
chr5	146132172	146132673	GPR151 (-236670), PPP2R2B (+303114)
chr3	156207717	156208343	SSR3 (+64943), KCNAB1 (+369693)
chr7	13889228	13889896	ETV1 (+140009)
chr18	45963614	45964115	ZBTB7C (-271928), CTIF (-101664)
chr15	22466075	22468518	TUBGCP5 (-366098), OR4N4 (+84915)
chr7	150357859	150369039	GIMAP6 (-33976), GIMAP2 (-19339)
chr4	40256449	40257076	CHRNA9 (-80583), RHOH (+58236)
chr6	122147164	122147810	HSF2 (-573204), GJA1 (+390649)
chr1	9711563	9714935	PIK3CD (+1446), CLSTN1 (+171335)
chr1	154310423	154310924	IL6R (-66995), ATP8B2 (+10398)
chr9	118377184	118379334	PAPPA (-537824), DEC1 (+474162)
chr3	177837921	177838422	TBL1XR1 (-923906), KCNMB2 (-438316)
chr5	81634815	81636753	ATP6AP1L (+60503), TMEM167A (+737531)
chr6	31060551	31063270	C6orf15 (+18425), MUC22 (+83660)
chr9	117692567	117693446	TNFSF8 (-310)
chr3	139029359	139029860	COPB2 (+78964), MRPS22 (+304962)
chr2	128171027	128171528	PROC (-4725)
chr8	33411009	33413105	RNF122 (+12586), MAK16 (+69789)
chr1	111764498	111765595	CHIA (-68491), CHI3L2 (+21654)
chr15	58678616	58680103	LIPC (-23408), AQP9 (+248965)
chr5	39187560	39188061	RICTOR (-113301), FYB (+82948)
chr1	84156082	84156583	TTLL7 (+308482)
chr10	70988185	70988866	HK1 (-59974), HKDC1 (+8467)
chr14	25141121	25145077	GZMB (-39626), STXBP6 (+376404)

chr20	44688618	44690216	NCOA5 (+29174), SLC12A5 (+39088)
chrX	53741668	53742169	HUWE1 (-30805), PHF8 (+329763)
chr17	74140936	74142299	FOXJ1 (-4238)
chr11	117886249	117887427	TMPRSS4 (-60966), IL10RA (+29775)
chr1	111416478	111418626	CD53 (+1776), LRIF1 (+89149)
chr14	64911486	64912784	AKAP5 (-21690), MTHFD1 (+57376)
chr10	33398140	33401898	ITGB1 (-153197), NRP1 (+225171)
chr11	94642642	94643949	CWC15 (+63480), AMOTL1 (+141759)
chrX	13099744	13100840	FAM9C (-37571), ATXN3L (+238226)
chr14	93569642	93570143	ITPK1 (+12255), CHGA (+180468)
chr15	38988139	38988640	THBS1 (-884904), RASGRP1 (-131383)
chr6	106603913	106606087	PRDM1 (+70805), ATG5 (+168666)
chr11	33033300	33033945	DEPDC7 (-3787)
chr3	188631495	188636324	TPRG1 (-255853), LPP (+703189)
chr1	6054048	6054874	NPHP4 (-1930)
chr18	60172981	60173482	ZCCHC2 (-17008), TNFRSF11A (+180684)
chr8	27235644	27237360	PTK2B (+67503), CHRNA2 (+100311)
chr1	172307342	172316216	PIGC (+101447), DNMT3 (+501158)
chr8	126649332	126650145	TRIB1 (+207176), FAM84B (+920899)
chr7	50305726	50306227	IKZF1 (-42341), C7orf72 (+170345)
chr14	98169486	98169987	VRK1 (+906096)
chr22	27044027	27044528	CRYBA4 (+26350)
chr8	121741378	121748646	SNTB1 (+80501), MTBP (+287346)
chr13	42968598	42969452	TNFSF11 (-179264), AKAP11 (+122736)
chr2	158274258	158276120	ERMN (-90964), CYTIP (+25465)
chr11	117821473	117822828	IL10RA (-34912), TMPRSS13 (-22071)
chr2	106412885	106416614	C2orf40 (-267362), NCK2 (+53396)
chr3	33096006	33096820	TMPPE (+41880), CCR4 (+103347)
chr6	149461157	149461658	TAB2 (-180780), UST (+392944)
chr5	150593230	150595837	ANXA6 (-57091), GM2A (-37919)
chr14	67954483	67955783	PLEK2 (-76216), TMEM229B (+26888)
chr5	175956786	175957287	RNF44 (+7384), FAF2 (+81681)
chr1	206729868	206733340	RASSF5 (+50725), EIF2D (+54300)
chr5	135372133	135373344	SMAD5 (-95797), TGFBI (+8155)
chr22	47144601	47147165	TBC1D22A (-12635), CERK (-11725)
chr1	172148999	172152131	PIGC (+262661), DNMT3 (+339944)
chr5	148188024	148188525	HTR4 (-154559), ADRB2 (-17881)
chr13	37709894	37712375	CSNK1A1L (-31332), POSTN (+461846)
chr1	110344226	110346000	CSF1 (-108142), EPS8L3 (-38464)
chr7	94036043	94036544	CASD1 (-102816), COL1A2 (+12421)
chr7	80791030	80791531	SEMA3C (-242614), HGF (+608233)
chr7	55376087	55376588	LANCL2 (-56803), EGFR (+289544)
chr2	30487147	30490315	LCLAT1 (-181392), LBH (+34334)
chr12	14538001	14539614	ATF7IP (+20192), PLBD1 (+182475)
chr16	68108153	68108654	DDX28 (-50634), NFATC3 (-11157)
chr1	159043186	159048728	AIM2 (+734)
chr7	150253513	150254014	GIMAP4 (-10601), GIMAP7 (+41846)
chr18	33732542	33733043	MOCOS (-34689), ELP2 (+22932)
chr9	134126704	134135828	PPAPDC3 (-33815), NUP214 (+130318)
chr11	46267045	46271623	PHF21A (-126773), CREB3L1 (-29878)
chr1	169680426	169680927	SELL (+162)
chr2	113930767	113932978	PSD4 (+325)
chr12	47298292	47299145	PCED1B (-174667), SLC38A4 (-78939)
chr2	152494028	152494529	NEB (+96722), RIF1 (+227824)
chr10	50352395	50354421	VSTM4 (-29854), C10orf128 (+42996)
chr4	156549148	156550458	MAP9 (-251681), GUCY1A3 (-38547)

chr1	89827245	89831849	GBP6 (-70)
chr8	124849199	124853884	ANXA13 (-101900), FER1L6 (-12685)
chr1	161151319	161157417	B4GALT3 (-7093), ADAMTS4 (+14478)
chr1	101578106	101578607	S1PR1 (-124087), DPH5 (-87029)
chr5	1789375	1795898	LPCAT1 (-268545), MRPL36 (+7372)
chr15	81162705	81163206	KIAA1199 (+91244), MESDC2 (+119263)
chr6	16728355	16729836	ATXN1 (+32591), GMPR (+490285)
chr12	51712654	51713282	SMAGP (-48294), BIN2 (+4980)
chrX	13018146	13019217	TMSB4X (+25453), FAM9C (+44039)
chr2	225821841	225822958	CUL3 (-372335), DOCK10 (+84759)
chr13	43632047	43632898	DNAJC15 (+35134), ENOX1 (+728571)
chr1	221898815	221899873	DUSP10 (+16174), HLX (+847645)
chr2	71644627	71645128	DYSF (-48954), ZNF638 (+85984)
chr4	148281827	148284024	EDNRA (-119158), POU4F2 (+722881)
chr16	67589195	67590936	CTCF (-6244), FAM65A (+26436)
chrX	13103436	13105141	FAM9C (-41568), ATXN3L (+234229)
chr21	37012739	37013240	RUNX1 (-591349), SETD4 (+419569)
chr16	78776092	78776769	WWOX (+643121), MAF (+858180)
chr5	75955483	75956117	F2R (-56068), F2RL2 (-36541)
chr12	68023690	68025018	DYRK2 (-18147), CAND1 (+361293)
chr4	6690075	6692480	S100P (-3518)
chr13	42967058	42967698	TNFSF11 (-180911), AKAP11 (+121089)
chr2	28646671	28647172	PLB1 (-72016), FOSL2 (+31197)
chr14	65394992	65395493	CHURC1-FNTB (+14032), GPX2 (+14288)
chr12	91708645	91713498	DCN (-134172), BTG1 (+828601)
chr12	89044152	89045417	KITLG (-70547), DUSP6 (+702263)
chr10	15249981	15251477	NMT2 (-40037), FAM171A1 (+162329)
chr6	32911964	32912835	HLA-DMB (-3553)
chr21	46333520	46335348	PTTG1IP (-40682), ITGB2 (+14354)
chr9	21680366	21686718	IFNE (-201230), MTAP (-119000)
chr10	105230300	105232013	CALHM1 (-12512), CALHM3 (+7840)
chr6	149551358	149557622	TAB2 (-87698), UST (+486026)
chr13	51465575	51469805	RNASEH2B (-16124), DLEU1 (+811383)
chr14	102188629	102189263	PPP2R5C (-39189), DIO3 (+161258)
chr17	7239963	7240764	ACAP1 (+516)
chr11	6766539	6768210	MRPL17 (-62743), OR2AG2 (+22911)
chr14	71466197	71467666	SIPA1L1 (-529110), PCNX (+92810)
chr1	112013028	112013529	C1orf162 (-3135)
chr22	28538810	28540452	PITPNB (-224375), TTC28 (+536222)
chr2	189856049	189862899	COL3A1 (+20428), COL5A2 (+185131)
chr9	132631912	132632413	USP20 (+34414), FNBP1 (+173278)
chr9	139894562	139895219	CLIC3 (-3636)
chr15	22449733	22450567	TUBGCP5 (-383245), OR4N4 (+67768)
chr7	121184197	121185645	PTPRZ1 (-328222), FAM3C (-148533)
chr12	73141130	73141910	TRHDE (+475057)
chr20	38515064	38515691	MAFB (+802502), DHX35 (+924400)
chr8	61838170	61843650	CLVS1 (-359604), CHD7 (+249573)
chr2	175460517	175465032	GPR155 (-110967), WIPF1 (+36532)
chr7	50301934	50302857	IKZF1 (-45922), C7orf72 (+166764)
chr10	22934613	22936014	PIP4K2A (+68170), SPAG6 (+300915)
chr11	60793386	60794738	CD5 (-75805), CD6 (+54910)
chr11	65694474	65695907	SART1 (-33969), DRAP1 (+8463)
chr1	121260703	121261387	FCGR1B (-325108)
chr1	9776922	9778368	PIK3CD (+65842), CLSTN1 (+106939)
chr1	225653958	225656167	LBR (-38544), ENAH (+185781)
chr14	76343075	76343576	TGFB3 (+104208), TTLL5 (+215705)

chr4	57622789	57625576	HOPX (-76311), SPINK2 (+63725)
chr15	75074110	75083469	LMAN1L (-26267), CSK (+4392)
chr8	125575256	125578424	NDUFB9 (+25496), MTSS1 (+163830)
chr19	36419209	36422953	TYROBP (-21884), LRFN3 (-5371)
chr13	96161938	96162589	ABCC4 (-208581), CLDN10 (-42715)
chr1	93446986	93447487	MTF2 (-97558), FAM69A (-20180)
chr1	90218669	90229664	LRRRC8D (-62424), LRRRC8C (+125536)
chr1	160548986	160549612	CD84 (-5)
chr2	231506997	231509833	CAB39 (-69145), SP100 (+227434)
chr9	131998492	131998993	NTMT1 (-372420), PPP2R4 (+125146)
chr10	11204046	11209160	CELF2 (+146710), USP6NL (+367671)
chr6	122158702	122160134	HSF2 (-561273), GJA1 (+402580)
chr2	189387725	189395323	COL3A1 (-447522), GULP1 (+233965)
chr5	156967355	156969338	ADAM19 (+34436), NIPAL4 (+81320)
chr21	43605998	43611152	ABCG1 (-30653), UMODL1 (+117149)
chr8	134083038	134084358	WISP1 (-119584), SLA (-11095)
chr3	184503096	184505521	VPS8 (-25622), EPHB3 (+224737)
chr21	36308859	36309360	RUNX1 (+112531), CLIC6 (+267422)
chr10	97620605	97621106	CCNJ (-182484), ENTPD1 (+105447)
chr5	171605036	171607740	FBXW11 (-172744), STK10 (+9002)
chr4	26290427	26291113	RBPJ (-30562), SMIM20 (+374944)
chr2	27908755	27909256	MRPL33 (-85578), SUPT7L (-22330)
chr12	68872627	68877033	MDM1 (-148718), RAP1B (-129789)
chr17	65436176	65438146	NOL11 (-276788), PITPNC1 (+62890)
chr17	29637698	29639301	OMG (-14071), EVI2B (+2630)
chr1	33445965	33447953	RNF19B (-16673), AK2 (+55634)
chr7	8213748	8219150	ICA1 (+85462), GLCC1 (+208024)
chr5	74537588	74538369	GCNT4 (-211255), HMGCR (-95014)
chr16	23092063	23095046	USP31 (+67036), HS3ST2 (+268057)
chr17	59386382	59387521	TBX2 (-90305), BCAS3 (+631702)
chr3	9222125	9222626	RAD18 (-217190), SRGAP3 (+68687)
chr3	187717924	187718679	BCL6 (-254787), LPP (-212419)
chr1	192519152	192520793	RGS1 (-24884), RGS21 (+233851)
chr1	181118982	181119608	CACNA1E (-333586), MR1 (+116156)
chr18	2634922	2638217	SMCHD1 (-19167), NDC80 (+65060)
chr17	47465969	47466470	ZNF652 (-26385), PHB (+26022)
chr7	139528078	139531666	TBXAS1 (+920)
chr14	98638329	98639153	NONE
chr11	85849526	85850027	EED (-105809), PICALM (-69806)
chr1	43396614	43399694	SLC2A1 (+26347), ZNF691 (+85847)
chr11	122614420	122614921	CRTAM (-94537), UBASH3B (+88288)
chr12	102561196	102561697	PMCH (+30176), PARPBP (+47424)
chr17	27465302	27468994	TIAF1 (-61273), MYO18A (+40282)
chr11	94986664	94988917	SESN3 (-23430), FAM76B (+535164)
chr20	35224095	35224869	C20orf24 (-9743), TGIF2-C20orf24 (+21526)
chr1	206939312	206940143	IL10 (+6111), MAPKAPK2 (+81346)
chr2	85171555	85174890	KCMF1 (-24993), TMSB10 (+40474)
chr14	52643158	52643659	NID2 (-107697), PTGDR (-91022)
chr1	112146664	112148018	ADORA3 (-101231), RAP1A (-15064)
chr5	130592567	130593418	CDC42SE2 (-6800), LYRM7 (+86490)
chr3	124826405	124826906	HEG1 (-51854), SLC12A8 (+103587)
chr2	8661200	8661701	ID2 (-157524)
chr20	31123120	31124122	ASXL1 (+177466), COMMD7 (+208182)
chr8	21769139	21771197	GFRA2 (-123846), DOK2 (+1203)
chr1	172319475	172332300	PIGC (+87338), DNM3 (+515267)
chr10	78164095	78166401	C10orf11 (+622729)

chr6	136200531	136202097	PDE7B (+28480), MTRF2 (+370135)
chr2	235197830	235201580	ARL4C (+205992), SPP2 (+240362)
chr11	10480678	10481435	AMPD3 (+8829), MTRNR2L8 (+49666)
chr8	130983733	130984234	FAM49B (-31906), ASAP1 (+430233)
chr7	94037658	94043796	CASD1 (-98383), COL1A2 (+16854)
chr6	159482939	159483440	FNDC1 (-107239), TAGAP (-17006)
chr3	99113261	99113762	DCBLD2 (-492979), COL8A1 (-243807)
chr7	134301766	134304269	BPGM (-28565), AKR1B15 (+69130)
chr13	42066319	42067313	RGCC (+35121), VWA8 (+468404)
chr17	4389040	4389685	SPNS2 (-12770), SPNS3 (+52380)
chr6	130069193	130072815	ARHGAP18 (-39634), TMEM244 (+111688)
chr8	121760349	121761164	SNTB1 (+64756), MTBP (+303091)
chr9	134054193	134055752	PPAPDC3 (-110108), NUP214 (+54025)
chr14	98190114	98192030	VRK1 (+927431)
chr22	36828075	36829206	MYH9 (-44578), TXN2 (+49436)
chr22	47186568	47187662	TBC1D22A (+28597)
chr16	81037482	81038387	CENPN (-2884), CMC2 (+2784)
chr12	76337365	76339791	KRR1 (-433177), PHLDA1 (+89134)
chr14	21247851	21253061	RNASE6 (+1246), RNASE1 (+20981)
chr19	35953216	35953717	FFAR2 (+14264), KRTDAP (+27966)
chr20	31553030	31566543	SUN5 (+32452), EFCAB8 (+113058)
chr6	20320135	20320636	MBOAT1 (-107756), E2F3 (-82012)
chr17	47285279	47297903	GNGT2 (-4829), ABI3 (+4002)
chr8	121868644	121870625	SNTB1 (-44122), HAS2 (+783995)
chr2	189869760	189870261	COL3A1 (+30965), COL5A2 (+174594)
chr2	8617392	8618737	ID2 (-200910)
chr19	8258451	8259943	FBN3 (-44467), CERS4 (-15040)
chr5	153599282	153602859	SAP30L (-224446), GALNT10 (+30781)
chr1	172320726	172321502	PIGC (+92112), DNM3 (+510493)
chr9	92150440	92150941	SEMA4D (-116943), GADD45G (-69237)
chr15	77287142	77289634	PSTPIP1 (+962)
chr8	16219187	16219688	MSR1 (-169214), FGF20 (+640252)
chr5	141002974	141003621	DIAPH1 (-4676)
chr11	35352208	35352910	SLC1A2 (+88237), CD44 (+191831)
chr11	74986016	74988289	TPBGL (+35203), ARRB1 (+75596)
chr1	12148033	12148534	TNFRSF1B (-78776), TNFRSF8 (+24850)
chr3	69337524	69338025	LMOD3 (-166058), FRMD4B (+97449)
chr17	33539397	33542138	SLFN5 (-29287), SLC35G3 (-19356)
chr2	224463022	224463981	SCG2 (+3719), KCNE4 (+546640)
chr19	8631321	8644509	ZNF414 (-58871), MYO1F (+4546)
chr1	173300240	173300977	PRDX6 (-145796), TNFSF4 (-124157)
chr19	17294097	17295435	USE1 (-31402), MYO9B (+108175)
chr17	30893082	30898662	CDK5R1 (+82235), MYO1D (+308323)
chr3	13455892	13456735	IQSEC1 (-447146), NUP210 (+5495)
chr15	75069115	75070958	CSK (-4361)
chr22	39485950	39488099	APOBEC3H (-6255), APOBEC3G (+14015)
chr4	90237960	90238635	TIGD2 (+204330), SNCA (+519992)
chr17	16171101	16171779	PIGL (+50916), CENPV (+85373)
chr16	68033940	68034441	DPEP2 (+298)
chr22	36801729	36802230	MYH9 (-17917), TXN2 (+76097)
chr7	24495595	24496096	MPP6 (-117239), NPY (+172039)
chr11	36432656	36433640	PRR5L (+35593), TRAF6 (+98674)
chr8	121609661	121611305	MTBP (+152817), SNTB1 (+215030)
chr1	167596776	167601750	RCS1 (-67)
chr16	85968427	85971417	FOXF1 (-574211), IRF8 (+37513)
chrX	130946836	130947337	ENSG00000134602 (-210206), OR13H1 (+269137)

chr17	29648831	29649482	EVI2A (-390)
chr3	142886498	142892124	CHST2 (+51138), SLC9A9 (+678062)
chr21	36443951	36446436	RUNX1 (-23553), SETD4 (+987365)
chr5	156679838	156680339	CYFIP2 (-13049), ITK (+72252)
chr16	30193167	30199673	SLX1A (-8818), CORO1A (+1677)
chr19	55764793	55767341	TMEM86B (-25435), PPP6R1 (+4296)
chr7	135563684	135564185	FAM180A (-130341), MTPN (+98129)
chr5	124418956	124419457	ZNF608 (-338089)
chrX	9308169	9311316	FAM9B (-307575), TBL1X (-123305)
chr5	138778909	138779700	DNAJC18 (-4090)
chr2	234934191	234935513	SPP2 (-24491), TRPM8 (+108809)
chr2	61188374	61190731	PEX13 (-55304), REL (+80897)
chr7	134345052	134346865	CALD1 (-118442), BPGM (+14376)
chr4	169522394	169522895	PALLD (+104390), CBR4 (+408764)
chr1	202128954	202131466	PTPN7 (+499)
chr3	187494882	187495880	LPP (-435340), BCL6 (-31866)
chr12	47587182	47587683	AMIGO2 (-113785), RPAP3 (+512411)
chr12	9104193	9104694	M6PR (-1893)
chrX	13108644	13110811	FAM9C (-47007), ATXN3L (+228790)
chr1	154434974	154436840	TDRD10 (-39541), IL6R (+58238)
chr2	190133693	190134194	WDR75 (-172215), COL5A2 (-89339)
chr11	73691308	73692660	UCP2 (+2368), DNAJB13 (+30620)
chr3	30695583	30701665	TGFBR2 (+50531), GADL1 (+237633)
chr4	153176804	153177305	PET112 (-494880), FBXW7 (+280198)
chr7	150381145	150385083	GIMAP2 (+326)
chr16	86698141	86698873	FOXL1 (+86392), FBXO31 (+718856)
chr19	2620363	2622154	GNG7 (+81448), GADD45B (+145134)
chr10	80807285	80808803	ZMIZ1 (-20748)
chr9	89894854	89896324	GAS1 (-333485), DAPK1 (-217207)
chr20	56454096	56458027	PMEP1A1 (-171104), PPP4R1L (+428433)
chr20	50647963	50648464	SALL4 (-229155), ZFP64 (+160311)
chr1	175041055	175043057	TNN (+5062), TNR (+670850)
chr17	29633786	29650169	EVI2B (-848)
chr1	185795187	185795819	PRG4 (-469908), HMCN1 (+91820)
chr18	52818244	52818745	RAB27B (+323065), TCF4 (+484690)
chr5	171541732	171542233	FBXW11 (-108339), STK10 (+73407)
chr10	127910902	127913512	ADAM12 (+164817), FANK1 (+327099)
chr2	12640610	12643109	TRIB2 (-215155), LPIN1 (+824139)
chr18	11324730	11326125	GNAL (-363527), PIEZO2 (-176841)
chr2	227756431	227756932	RHBDD1 (+56011), COL4A4 (+272147)
chr16	3123625	3127344	IL32 (+10100), ZSCAN10 (+17376)
chr5	118645072	118645573	TNFAIP8 (-44686)
chr14	62125660	62131456	HIF1A (-35782), PRKCH (+340123)
chr3	195277943	195279075	PPP1R2 (-8300), APOD (+32567)
chr9	118089948	118090929	PAPPA (-825644), DEC1 (+186342)
chr13	30721843	30722344	UBL3 (-297273), KATNAL1 (+159527)
chr1	32354132	32356431	SPOCD1 (-73630), PTP4A2 (+48706)
chr20	1637182	1638788	SIRPG (+440)
chr19	1066984	1069594	HMHA1 (+2367), POLR2E (+27309)
chr12	65062479	65065615	RASSF3 (+59754), GNS (+89180)
chr15	80260773	80261274	ST20-MTHFS (-44938), BCL2A1 (+2764)
chr10	31549911	31551624	ZNF438 (-229902), ZEB1 (-57333)
chr12	32049950	32051066	BICD1 (-209655), H3F3C (-105333)
chr2	158260402	158260903	ERMN (-76428), CYTIP (+40001)
chr10	75652751	75653252	CAMK2G (-18659), PLAU (-17913)
chr10	121274499	121280048	RGS10 (+24946), GRK5 (+310173)

chr1	227952684	227954863	PRSS38 (-49620), SNAP47 (+31077)
chr1	173174287	173174788	TNFSF18 (-154435), TNFSF4 (+1914)
chr1	40849047	40854096	ZFP69B (-64207), SMAP2 (+12203)
chr12	91642427	91643273	DCN (-65950), BTG1 (+896823)
chr18	43267038	43267539	SLC14A1 (-39401), SLC14A2 (+72523)
chr5	39201777	39202851	RICTOR (-127804), FYB (+68445)
chr10	26726483	26728913	APBB1IP (+566)
chr12	91501297	91506012	KERA (-51895), LUM (+1953)
chr12	54891525	54892026	NCKAP1L (+281)
chr1	160673198	160684227	SLAMF1 (-61628), CD48 (+2928)
chr13	105792122	105792623	DAOA (-326219)
chr10	121261927	121262983	RGS10 (+39765), GRK5 (+295354)
chr9	117690791	117691438	TNFSF15 (-122709), TNFSF8 (+1582)
chr8	136220380	136222406	ZFAT (-496112), KHDRBS3 (-248307)
chr12	91709164	91712418	DCN (-133891), BTG1 (+828882)
chr13	46870407	46871476	LCP1 (-85459), ESD (+500425)
chr12	58924108	58925936	LRIG3 (+389281), XRCC6BP1 (+589662)
chr2	86221332	86221833	ST3GAL5 (-105446), POLR1A (+111695)
chr13	40526807	40527308	COG6 (+297244), FOXO1 (+713676)
chr2	197104119	197106571	STK17B (-69046), HECW2 (+351990)
chr7	8171487	8172527	ICA1 (+129904), GLCCI1 (+163582)
chr3	4560807	4561555	BHLHE40 (-459620), ITPR1 (+26149)
chr9	137388497	137389354	COL5A1 (-144694), RXRA (+170500)
chr2	238340953	238345425	MLPH (-52622), COL6A3 (-20171)
chr20	37985591	37986490	DHX35 (+395063)
chr12	13500519	13501167	EMP1 (+151193), GRIN2B (+632210)
chr1	160807559	160808214	CD244 (+24663), LY9 (+41939)
chr19	9968456	9968957	PIN1 (+22708), OLFM2 (+78521)
chr22	37677463	37681142	CYTH4 (+879)
chr17	66342475	66342976	SLC16A6 (-55469), WIPI1 (+110836)
chr12	91433164	91433665	EPYC (-34612), KERA (+18345)
chr7	157094270	157095964	DNAJB6 (-34543), UBE3C (+163510)
chr17	2162928	2163429	SRR (-43819), HIC1 (+203575)
chr15	40597683	40602151	PLCB2 (+206)
chr1	53102274	53102908	FAM159A (+3575), ECHDC2 (+284848)
chr17	30829829	30832833	CDK5R1 (+17694), MYO1D (+372864)
chr2	38881488	38881989	HNRNPLL (-51568), GALM (-11313)
chr21	43536976	43537477	ABCG1 (-102001), UMODL1 (+45801)
chr20	62381934	62383078	SLC2A4RG (+11292), ZBTB46 (+80061)
chr10	81076835	81078171	PPIF (-29731), ZMIZ1 (+248711)
chr5	171601495	171603247	FBXW11 (-168727), STK10 (+13019)
chr19	36421245	36422450	LRFN3 (-4604)
chr10	32034113	32035228	ARHGAP12 (+183064), ZEB1 (+426570)
chr6	1113615	1117208	EXOC2 (-422301), FOXQ1 (-197263)
chr19	31868683	31869419	ZNF507 (-967449), TSHZ3 (-28598)
chr13	41060348	41060849	FOXO1 (+180135), COG6 (+830785)
chr10	64393655	64401355	ADO (-167011), ZNF365 (+263554)
chr2	69001312	69002917	ARHGAP25 (+40148), BMP10 (+96534)
chr11	119133841	119134342	MCAM (+53734), CBL (+57340)
chr8	59713297	59713978	NSMAF (-141545), TOX (+318129)
chr14	62605118	62606702	SYT16 (+143369), KCNH5 (+906263)
chr1	209938298	209949596	TRAF3IP3 (+12104), IRF6 (+35442)
chr6	45295697	45296380	RUNX2 (-67)
chr4	159041323	159042433	FAM198B (+52324), GRIA2 (+900008)
chr4	154965437	154966636	SFRP2 (-255765), DCHS2 (+346412)
chr1	151870409	151871339	THEM5 (-44701), THEM4 (+11410)

chr8	126524937	126527141	TRIB1 (+83476)
chr20	35597672	35598173	SAMHD1 (-17677), RBL1 (+126475)
chr6	42334521	42336009	MRPS10 (-149662), TRERF1 (+84518)
chr21	46344392	46353938	ITGB2 (-377)
chr2	8627644	8629212	ID2 (-190547)
chr7	94033188	94035021	CASD1 (-105005), COL1A2 (+10232)
chr9	129278354	129280561	LMX1B (-97264), MVB12B (+190330)
chr12	8216189	8220784	C3AR1 (+580)
chr6	5831501	5832405	NRN1 (+175247), FARS2 (+570676)
chr3	132312326	132314393	ACKR4 (-2721)
chr2	109647820	109649354	SH3RF3 (-97410), EDAR (-42759)
chr11	59946801	59957275	MS4A6A (-1342)
chr16	88748158	88749060	MVD (-19091), SNAI3 (+4292)
chr13	30950222	30950883	KATNAL1 (-68932), HMGB1 (+241181)
chr4	872653	873154	CPLX1 (-52918), GAK (+53182)
chr20	37987057	37987558	DHX35 (+396330)
chr13	40962540	40963041	FOXO1 (+277943), COG6 (+732977)
chr7	43698383	43699581	BLVRA (-99304), COA1 (-9087)
chr11	118094300	118095694	AMICA1 (+812)
chr2	192066270	192068066	STAT4 (-51182), MYO1B (-42947)
chr7	150411254	150416968	GIMAP1 (+466)
chr21	36930408	36938875	RUNX1 (-513001), SETD4 (+497917)
chr16	88330652	88334320	ZNF469 (-161393), BANP (+328862)
chr3	184503053	184505137	VPS8 (-25836), EPHB3 (+224523)
chr7	17569315	17576451	AHR (+234637), SNX13 (+407234)
chr9	132032947	132034209	NTMT1 (-337585), PPP2R4 (+159981)
chr8	8190090	8192783	ENSG00000182319 (+52571), ZNF705B (+390293)
chr2	200674847	200675681	SATB2 (-352445), FTCDNL1 (+40602)
chr18	43829573	43831219	RNF165 (-83791), C18orf25 (+76403)
chr11	118076689	118077999	SCN2B (-29956), AMICA1 (+18465)
chr4	10034662	10035477	SLC2A9 (-11963), WDR1 (+83414)
chr1	114413614	114415114	PTPN22 (+17)
chr6	35278323	35280214	PPARD (-31122), DEF6 (+13640)
chr5	171539751	171540252	FBXW11 (-106358), STK10 (+75388)
chr16	53551465	53553732	AKTIP (-15436), RPGRIP1L (+185159)
chr3	183269676	183274583	MCF2L2 (-126067), KLHL6 (+1347)
chr13	41578570	41579071	ELF1 (+14629), SLC25A15 (+215188)
chr2	220522695	220523196	SLC4A3 (+30654)
chr12	31985341	31986234	BICD1 (-274375), H3F3C (-40613)
chr7	150208548	150218722	GIMAP4 (-50730), GIMAP7 (+1717)
chr6	109223413	109224098	SESN1 (+192266), FOXO3 (+341687)
chr8	126942546	126943847	TRIB1 (+500634), FAM84B (+627441)
chr16	88856370	88857757	CDT1 (-12557), PIEZO1 (-5445)
chr2	74793231	74807042	DOK1 (+18924), M1AP (+75027)
chr2	234239865	234240366	DGKD (-23037), SAG (+23649)
chr11	88147689	88149288	CTSC (-77534), GRM5 (+648327)
chr1	200319922	200324451	ZNF281 (+56997), NR5A2 (+325457)
chr1	222167550	222168493	DUSP10 (-252504), HHIPL2 (+553423)
chr7	94053938	94055975	CASD1 (-84153), COL1A2 (+31084)
chr16	57073097	57077189	NLRC5 (+51733), FAM192A (+144833)
chr4	86622506	86623007	ARHGAP24 (+226490), MAPK10 (+658459)
chr16	50299483	50302106	ADCY7 (+368)
chr2	197047568	197048069	STK17B (-11520), HECW2 (+409516)
chr16	30482689	30483569	ITGAL (-850)
chr3	23817506	23819621	UBE2E1 (-28830), UBE2E2 (+573780)
chr1	172376929	172378090	PIGC (+35716), DNM3 (+566889)



chr5	36724881	36725382	NIPBL (-151729), SLC1A3 (+118675)
chr17	39463141	39466238	KRTAP16-1 (+815)
chr10	64144312	64144813	ADO (-419953), ZNF365 (+10612)
chr19	6669610	6670451	TNFSF14 (+568)
chr21	26934008	26935306	MRPL39 (+45172)
chr5	169064154	169065159	DOCK2 (+406)
chr7	94029484	94032561	CASD1 (-108087), COL1A2 (+7150)
chr2	231521254	231534881	CAB39 (-49492), SP100 (+247087)
chr12	111494753	111495604	CUX2 (+23351), FAM109A (+311746)
chr8	124489270	124489771	WDYHV1 (+60556), FBXO32 (+63925)
chr12	43150066	43151845	PRICKLE1 (-273159), ADAMTS20 (+794768)
chr18	33888263	33891279	FHOD3 (+12094), TPGS2 (+519387)
chr6	126123668	126124456	HINT3 (-153865), NCOA7 (+21755)
chr7	150371785	150377138	GIMAP6 (-44989), GIMAP2 (-8326)
chr17	34216999	34217648	CCL5 (-9812), RDM1 (+40453)
chr11	104574119	104580050	PDGFD (-542250), CASP12 (+192075)
chr4	169471353	169472056	PALLD (+53450), CBR4 (+459704)
chr5	39268963	39276276	FYB (-1861)
chr13	37747922	37751456	CSNK1A1L (-69886), POSTN (+423292)
chr12	47668883	47673182	AMIGO2 (-197385), RPAP3 (+428811)
chr4	77702638	77705501	SEPT11 (-166786), SHROOM3 (+347817)
chr8	66893630	66894131	PDE7A (-139694), DNAJC5B (-39914)
chr1	40861982	40862483	ZFP69B (-53546), SMAP2 (+22864)
chr17	65430636	65431137	NOL11 (-283062), PITPNC1 (+56616)
chr16	64372782	64374382	CDH11 (+782519)
chr10	88403096	88403740	WAPAL (-121846), OPN4 (-10896)
chr4	158940902	158942920	FAM198B (+152291), GRIA2 (+800041)
chr8	100511161	100511861	COX6C (+394779), VPS13B (+486017)
chr7	150372122	150376428	GIMAP6 (-44802), GIMAP2 (-8513)
chr9	137700888	137704564	FCN2 (-69932), COL5A1 (+169106)
chr10	33595101	33595602	ITGB1 (-348530), NRP1 (+29838)
chr10	6342085	6342973	PFKFB3 (+97635), PRKCQ (+279734)
chr18	29620393	29620894	RNF138 (-51174), RNF125 (+22309)
chr12	106451944	106452657	APPL2 (-822440), NUAK1 (+81510)
chr7	148260765	148262620	CUL1 (-134311)
chr1	60162694	60163636	HOOK1 (-117368), FGGY (+400512)
chr16	30194226	30199186	SLX1A (-8532), CORO1A (+1963)
chr2	196423786	196425776	SLC39A10 (-96690)
chr7	43684492	43691849	COA1 (+1724), STK17A (+65507)
chr12	12959588	12962558	DDX47 (-5207), APOLD1 (+82208)
chr6	166900491	166903707	MPC1 (-105613), RPS6KA2 (+373940)
chr6	149350624	149359402	TAB2 (-287175), UST (+286549)
chr8	29106953	29108464	KIF13B (+12881), HMBOX1 (+359788)
chr16	56881996	56885191	SLC12A3 (-15525), NUP93 (+119577)
chr20	55449599	55451599	TFAP2C (+246241), BMP7 (+391085)
chr9	137383598	137384099	COL5A1 (-149771), RXRA (+165423)
chr6	160883838	160884339	SLC22A3 (+114789), LPA (+203318)
chr3	32501009	32502458	CMTM6 (+43166), CMTM7 (+68571)
chr1	19802614	19804555	CAPZB (+8394), PQLC2 (+164763)
chr6	121870009	121870510	HSF2 (-850431), GJA1 (+113422)
chr17	16891331	16892380	MPRIIP (-54218), TNFRSF13B (-16454)
chrX	43502938	43503712	MAOA (-12142)
chr19	6798663	6804470	EMR1 (-86016), VAV1 (+28830)
chr10	5335533	5336613	UCN3 (-70899), AKR1C4 (+98647)
chr13	43565058	43567211	DNAJC15 (-31204), TNFSF11 (+417846)
chr12	109022139	109029560	SELPLG (+4)

chr10	33402491	33403612	ITGB1 (-156230), NRP1 (+222138)
chr1	172349811	172350469	PIGC (+63086), DNM3 (+539519)
chr16	3626203	3629103	SLX4 (+33946), CLUAP1 (+76729)
chr2	151465503	151466460	RND3 (-121801), RBM43 (+652411)
chr1	160546790	160548253	SLAMF6 (-54479), CD84 (+1772)
chr13	38114749	38115916	CSNK1A1L (-435530), POSTN (+57648)
chr8	8654930	8655431	ERI1 (-204476), CLDN23 (+95733)
chr10	13755110	13755611	PRPF18 (+126434), FRMD4A (+617522)
chr8	23075553	23078628	TNFRSF10D (-55548), TNFRSF10A (+5548)
chr16	89830658	89831369	ZNF276 (+43062), FANCA (+52040)
chr19	17961036	17962004	JAK3 (-2679)
chr16	88219671	88222259	ZNF469 (-272914), BANP (+217341)
chr22	27620065	27620566	MN1 (+577170), CRYBA4 (+602388)
chr17	33866635	33868835	SLFN12L (-52859), SLFN14 (+17382)
chr19	35702353	35705543	FAM187B (+15684), FXYD5 (+58272)
chr11	1778768	1780411	IFITM10 (-7769), CTSD (+5632)
chr4	13889821	13896144	BOD1L1 (-263636)
chr2	176162	176663	FAM110C (-130028), SH3YL1 (+87652)
chr12	76337548	76339065	KRR1 (-432906), PHLDA1 (+89405)
chr1	117045742	117047782	CD58 (+66899), ATP1A1 (+130273)
chr12	91718542	91723221	DCN (-143982), BTG1 (+818791)
chr18	32609792	32610293	MAPRE2 (-11281), DTNA (+436740)
chr1	172309984	172314586	PIGC (+100941), DNM3 (+501664)
chr6	159070544	159071045	SYTL3 (-11556), DYNLT1 (-5024)
chr18	13463779	13465718	LDLRAD4 (+245963), FAM210A (+261810)
chr2	192348908	192355440	NABP1 (-191084), MYO1B (+242059)
chr5	149446031	149446841	TIGD6 (-65706), CSF1R (+46499)
chr12	92428118	92429798	DCN (-852058), BTG1 (+110715)
chr17	29644372	29646300	EVI2B (-4206)
chr20	31125183	31128478	ASXL1 (+180676), COMMD7 (+204972)
chr1	100866352	100866853	GPR88 (-137090), CDC14A (+48556)
chr6	109216649	109217299	SESN1 (+199048), FOXO3 (+334905)
chr1	28318780	28319420	XKR8 (+33127), EYA3 (+96107)
chr21	36874963	36878687	RUNX1 (-455184), SETD4 (+555734)
chr1	42268497	42269714	EDN2 (-318764), HIVEP3 (+115063)
chr10	121275239	121279381	RGS10 (+24910), GRK5 (+310209)
chr9	89019371	89024667	ZCCHC6 (-52692), GAS1 (+540085)
chr17	33814464	33815223	SLFN12L (+32)
chr3	156200711	156202664	SSR3 (+71285), KCNAB1 (+363351)
chr2	189585883	189586576	COL3A1 (-252816), GULP1 (+428671)
chr2	8655857	8656675	ID2 (-162709)
chr1	59407900	59408799	FGGY (-354303), JUN (-158565)
chr5	14593606	14595485	FAM105B (-70311), TRIO (+450735)
chr15	81587509	81592244	STARD5 (+26589), IL16 (+72136)
chr19	42702944	42707084	POU2F2 (-68435), DEDD2 (+19261)
chr6	112349470	112349971	FYN (-155066), WISP3 (-25741)
chr11	117873107	117874886	TMPRSS4 (-73807), IL10RA (+16934)
chr4	185434616	185436596	IRF2 (-39872), CASP3 (+135023)
chr17	28032471	28034410	CORO6 (-83524), SSH2 (+223729)
chr12	68375326	68375827	IFNG (+177950), DYRK2 (+333076)
chr7	2913498	2914137	GNA12 (-29860), CARD11 (+169761)
chr16	10847178	10847880	NUBP1 (+9827), TVP23A (+65113)
chr10	4011915	4012416	AKR1E2 (-856280), KLF6 (-184699)
chr2	74409171	74409672	MOB1A (-3427)
chr16	30613307	30613808	ZNF785 (-16466), ZNF689 (+8142)
chr3	100289211	100289712	GPR128 (-38971), TMEM45A (+77999)

chr11	19744960	19745987	NAV2 (+10331), DBX1 (+436396)
chr2	58334724	58335854	FANCL (+133196), VRK2 (+200503)
chr6	129992864	129995422	ARHGAP18 (+37227), LAMA2 (+789801)
chr19	14466506	14467172	LPHN1 (-149840), CD97 (-25417)
chr21	36360210	36360711	RUNX1 (+61180), CLIC6 (+318773)
chrX	12972766	12976504	TMSB4X (-18594), TLR8 (+49896)
chr12	113344072	113346679	OAS1 (+788)
chr14	65800530	65802403	MAX (-232279), FUT8 (-75843)
chr20	9969186	9970654	PAK7 (-150231), ANKEF1 (-45777)
chr17	37288734	37291858	PLXDC1 (+17606), LASP1 (+264184)
chr13	99880717	99881968	UBAC2 (+28315), GPR18 (+32655)
chr1	160537286	160538825	SLAMF6 (-45013), CD84 (+11238)
chr2	225811124	225812366	CUL3 (-361680), DOCK10 (+95414)
chr14	76287831	76290529	TGFB3 (+158354), TTLL5 (+161559)
chr2	175710228	175710875	CHRNA1 (-81363), CHN1 (+159402)
chr9	100864943	100865444	TRIM14 (+16286), NANS (+46173)
chr19	48760896	48761942	CARD8 (-17099), ZNF114 (-11940)
chr14	95989640	95991004	SYNE3 (-48149), GLRX5 (-10608)
chr5	86414044	86419655	RASA1 (-146855), COX7C (+503077)
chr14	61804254	61804755	HIF1A (-359835), PRKCH (+16070)
chr5	66517833	66518334	PIK3R1 (-993464), CD180 (-25457)
chr17	47286804	47289162	GNGT2 (-1221), ABI3 (+394)
chr19	4914846	4916971	KDM4B (-53223), PLIN3 (-48129)
chr10	70981574	70982908	HK1 (-66259), HKDC1 (+2182)
chr2	68961387	68962580	ARHGAP25 (+17)
chr1	205256535	205257464	NUAK2 (+33883), TMCC2 (+59696)
chr1	234910864	234911529	IRF2BP2 (-165926), TOMM20 (+381054)
chr1	209928973	209930566	TRAF3IP3 (-2073)
chr6	31552912	31556802	LTB (-4655), LST1 (-120)
chr3	46411775	46412430	CCR5 (+470)
chr6	106966700	106968889	AIM1 (+8065), RTN4IP1 (+109567)
chr6	139854406	139856028	CITED2 (-159460)
chr15	75422849	75423350	GOLGA6C (-127840), PPCDC (+107204)
chr21	43481807	43483394	ZBTB21 (-52135), UMODL1 (-8825)
chr3	183272764	183273925	KLHL6 (+132)
chr2	238349311	238350898	MLPH (-45706), COL6A3 (-27087)
chr8	124850068	124853438	ANXA13 (-102111), FER1L6 (-12474)
chr1	40858079	40858719	ZFP69B (-57380), SMAP2 (+19030)
chr21	36398534	36400985	RUNX1 (+21881), CLIC6 (+358072)
chr10	33410981	33411769	ITGB1 (-164553), NRP1 (+213815)
chr19	52292857	52293358	FPR3 (-5308), FPR2 (+27095)
chr7	3134221	3135409	SDK1 (-206265), CARD11 (-51236)
chr2	190275839	190278323	COL5A2 (-232476), WDR75 (-29078)
chr6	137957865	137958366	TNFAIP3 (-230465), OLIG3 (-142585)
chr13	31313686	31315287	MEDAG (-165841), ALOX5AP (+4842)
chr19	40447016	40447783	PSMC4 (-29512), FCGBP (-6867)
chr6	126120050	126120849	HINT3 (-157477), NCOA7 (+18143)
chr14	25143255	25143944	GZMB (-40127), STXBP6 (+375903)
chr9	126978560	126981534	NEK6 (-40195), LHX2 (+206158)
chr21	46339171	46341609	PTTG1IP (-46638), ITGB2 (+8398)
chr14	52042207	52043204	FRMD6 (-75959), TMX1 (+335820)
chrX	39631273	39631774	BCOR (+325132), MID1IP1 (+968538)
chr12	58922206	58923568	LRIG3 (+391416), XRCC6BP1 (+587527)
chr19	42054876	42056844	ATP5SL (-110416), CEACAM21 (-26741)
chr16	89381457	89384884	ZNF778 (+99053), ANKRD11 (+173798)
chr2	96981003	96982367	SNRNP200 (-10432), ITPRIPL1 (-10250)

chr3	56815666	56821605	CCDC66 (+227435), ARHGEF3 (+294700)
chr6	114126677	114127178	MARCKS (-51613)
chr3	188849388	188851197	TPRG1 (-39470), LPP (+919572)
chr10	4015074	4016110	AKR1E2 (-852854), KLF6 (-188125)
chr5	169729353	169730452	LCP2 (-4672)
chr20	51109214	51110243	TSHZ2 (-479217), ZFP64 (-301204)
chr15	31555089	31558521	TRPM1 (-103329), KLF13 (-62253)
chr14	91143716	91144513	CALM1 (+280788), RPS6KA5 (+382837)
chr6	106348327	106349228	PREP (-497819), PRDM1 (-185417)
chr1	169013128	169013629	DPT (-314877), ATP1B1 (-61556)
chr14	53574756	53575619	FERMT2 (-157373), DDHD1 (+44628)
chr11	86431107	86431608	PRSS23 (-79924), ME3 (-47680)
chr1	161921867	161924093	OLFML2B (+70664), ATF6 (+186896)
chr15	70550812	70551596	TLE3 (-160689), UACA (+504728)
chr18	53166790	53169318	TCF4 (+135131), RAB27B (+672624)
chr5	169703621	169707635	LCP2 (+19603), FOXI1 (+172727)
chr14	90147733	90148234	FOXN3 (-62510), EFCAB11 (+273049)
chr20	46437923	46438424	SULF2 (-22844)
chr10	6389510	6390805	PFKFB3 (+145264), PRKCQ (+232105)
chr20	61369986	61374299	MRGBP (-55662), NTSR1 (+31954)
chr2	189391069	189393531	COL3A1 (-446746), GULP1 (+234741)
chr9	5493891	5494392	PDCD1LG2 (-16428), CD274 (+43617)
chr22	37702758	37705707	CYTH4 (+25809), ELFN2 (+119272)
chr13	40683335	40684448	COG6 (+454078), FOXO1 (+556842)
chr7	150145231	150151478	GIMAP8 (+637)
chr9	92137281	92138880	SEMA4D (-104333), GADD45G (-81847)
chr16	17462352	17464492	XYLT1 (+101316)
chr2	100386373	100386874	REV1 (-280127), AFF3 (+335421)
chr17	72733141	72735676	SLC9A3R1 (-10382), RAB37 (+1353)
chr4	71813098	71813599	DCK (-45807), MOB1B (+45254)
chr17	37236440	37239918	PLXDC1 (+69723), LASP1 (+212067)
chr5	95206033	95206534	GLRX (-47866), ELL2 (+91491)
chr21	36354854	36356333	RUNX1 (+66047), CLIC6 (+313906)
chr16	88331619	88333206	ZNF469 (-161466), BANP (+328789)
chr17	29135523	29137058	CRLF3 (+15503), TBC1D29 (+252161)
chr11	116722133	116725465	APOA1 (-15133), SIK3 (+245194)
chr12	104856743	104857413	CHST11 (+6327), SLC41A2 (+465355)
chr8	1969121	1969622	MYOM2 (-23783), ARHGEF10 (+197230)
chr9	134112734	134114005	PPAPDC3 (-51711), NUP214 (+112422)
chr11	95947612	95951258	MTMR2 (-291976), MAML2 (+126909)
chr12	7059736	7063759	PTPN6 (+1314), PHB2 (+18240)
chr9	92769617	92770426	GADD45G (+550094), DIRAS2 (+635364)
chr1	172236426	172237231	PIGC (+176397), DNMT3 (+426208)
chr12	25204480	25206355	LRMP (-28)
chr11	59951244	59951947	MS4A6A (-900)
chr14	81930851	81931352	STON2 (-37354), SEL1L (+69103)
chr17	37248551	37249548	PLXDC1 (+58852), LASP1 (+222938)
chr9	139928978	139929970	FUT7 (-2012)
chr17	37250516	37253763	PLXDC1 (+55762), LASP1 (+226028)
chr2	163095050	163103625	FAP (+707)
chr3	46339555	46340209	CCR2 (-55353), CCR3 (+56010)
chr15	40599274	40601382	PLCB2 (-205)
chr14	77769373	77770197	NGB (-32130), GSTZ1 (-17442)
chr1	200321003	200323517	ZNF281 (+56924), NR5A2 (+325530)
chr14	100530645	100532492	EVL (-46)
chr10	125823632	125825208	CPXM2 (-173090), CHST15 (+27550)

chr16	21656379	21656880	IGSF6 (+7351), METTL9 (+45833)
chr19	10237239	10237969	EIF3G (-7026), DNMT1 (+68151)
chr1	244482352	244483977	ADSS (+132271), ZBTB18 (+268580)
chr1	236161734	236163578	LYST (-132436), NID1 (+65806)
chr7	150452170	150453930	TMEM176A (-44441), GIMAP5 (+18614)
chr10	63156164	63159239	RHOBTB1 (-453697), TMEM26 (+55506)
chr2	37851038	37853990	CDC42EP3 (+46820), QPCT (+280797)
chr21	36847647	36849059	RUNX1 (-426712), SETD4 (+584206)
chr2	46264346	46264984	EPAS1 (-259876), PRKCE (+385752)
chr16	28995388	28997268	LAT (+181)
chr18	72781577	72783598	ZADH2 (+138715), ZNF407 (+439612)
chr7	143070590	143073436	ZYX (-6160), CLCN1 (+58794)
chr9	123884120	123884621	CNTRL (+47081), RAB14 (+79776)
chr16	10842292	10842793	NUBP1 (+4841), TVP23A (+70099)
chr1	28195193	28196487	THEMIS2 (-3239)
chr9	447906	448666	KANK1 (-22005), DOCK8 (+233421)
chr17	17306684	17308048	MED9 (-72934), NT5M (+100717)
chr19	15574775	15575957	RASAL3 (+11)
chr21	45772344	45774334	TRPM2 (+200)
chr5	169702342	169702843	LCP2 (+22638), FOXI1 (+169692)
chr1	59483864	59487309	FGGY (-277066), JUN (-235802)
chr6	24741103	24746497	GMNN (-31366), C6orf62 (-22736)
chr18	10101836	10102337	APCDD1 (-352538), VAPA (+188028)
chr11	122598129	122598630	CRTAM (-110828), UBASH3B (+71997)
chr2	28446118	28448778	RBKS (-333483), FOSL2 (-168277)
chr2	99374024	99377468	MGAT4A (-28157), TSGA10 (+395634)
chr11	128597228	128599203	FLI1 (+34326), KCNJ1 (+114213)
chr10	121065088	121066468	GRK5 (+98677), RGS10 (+236442)
chr6	137557787	137563597	IFNGR1 (-20106), OLIG3 (+254839)
chr7	150263965	150267361	GIMAP4 (+1298), GIMAP6 (+63810)
chr5	153600269	153601875	SAP30L (-224445), GALNT10 (+30782)
chr9	134127550	134132517	PPAPDC3 (-35047), NUP214 (+129086)
chr19	48752097	48754091	ZNF114 (-20265), CARD8 (-8774)
chr5	18745753	18746516	NONE
chr19	8581858	8584003	ZNF414 (-3887)
chr13	42036993	42040214	RGCC (+6909), VWAA8 (+496616)
chr18	56603899	56604400	SEC11C (-202559), ZNF532 (+74318)
chr7	150412541	150415176	GIMAP1 (+214)
chr2	136995738	136997876	THSD7B (-642942), CXCR4 (-122994)
chr1	89828213	89830309	GBP6 (-356)
chr11	128594963	128596677	FLI1 (+31930), KCNJ1 (+116609)
chr17	57829297	57836958	VMP1 (+48302), TUBD1 (+137168)
chr6	159460030	159460531	EZR (-219837), TAGAP (+5903)
chr18	66095722	66096223	DSEL (-911756), TMX3 (+286562)
chr14	90186457	90187214	FOXN3 (-101362), EFCAB11 (+234197)
chr12	55329366	55330071	TESPA1 (+48737), MUCL1 (+81398)
chr6	152621232	152624712	SYNE1 (+335562), ESR1 (+611341)
chr16	10843422	10844482	NUBP1 (+6250), TVP23A (+68690)
chr21	36416475	36426325	RUNX1 (+241)
chr14	91839146	91839776	GPR68 (-119192), CCDC88C (+44660)
chr19	17515957	17518598	BST2 (-821)
chr1	206943174	206944645	IL10 (+1929), MAPKAPK2 (+85528)
chr18	28827388	28828595	DSC1 (-85173), DSG1 (-70060)
chr5	71768208	71768709	ZNF366 (+35095), PTC2 (+152265)
chr3	62587544	62591509	FEZF2 (-230337), CADPS (+271527)
chr12	96893893	96896976	NEDD1 (-405809), CDK17 (-101097)

chrX	128910405	128911949	SASH3 (-2783)
chr20	56201855	56205528	ZBP1 (-8163), PMEPA1 (+81266)
chr2	65144854	65145355	SERTAD2 (-264058), SLC1A4 (-71430)
chr6	45404087	45405766	SUPT3H (-59257), CLIC5 (+643205)
chr4	79582429	79584566	BMP2K (-114034), ANXA3 (+110825)
chr1	25348473	25350761	RUNX3 (-58116), SYF2 (+209367)
chr4	184270084	184270967	CDKN2AIP (-95218), CLDN24 (-26947)
chr11	12197519	12198020	MICALCL (-110677), MICAL2 (+65632)
chr4	79575584	79581698	BMP2K (-118891), ANXA3 (+105968)
chr11	89223655	89225289	NOX4 (+181)
chr5	14810152	14811186	ANKH (+61218), FAM105B (+145812)
chr7	38397943	38398838	STARD3NL (+180567), AMPH (+272776)
chr6	32908388	32909938	HLA-DMB (-316)
chr5	39273829	39275612	FYB (-3962)
chr20	42569312	42573204	TOX2 (+27766), JPH2 (+244960)
chr20	52258467	52260792	ZNF217 (-49252), BCAS1 (+427503)
chr3	50627666	50629157	CISH (+20791), HEMK1 (+21784)
chr7	150178290	150182989	GIMAP7 (-31278), GIMAP8 (+32922)
chr4	140578301	140580270	SETD7 (-101358), MGST2 (-7636)
chr16	17542693	17543366	XYLT1 (+21708)
chr1	33564360	33566423	ADC (+18678), TRIM62 (+81875)
chr9	128411965	128414231	MAPKAP1 (+56415), GAPVD1 (+388987)
chr20	3400661	3401398	SLC4A11 (-182218), ATRN (-50657)
chr1	172363257	172364981	PIGC (+49107), DNM3 (+553498)
chr9	132707073	132708980	FNBP1 (+97414), USP20 (+110278)
chr1	159045924	159047772	AIM2 (-157)
chr6	130008264	130008765	ARHGAP18 (+22855), LAMA2 (+804173)
chr7	150210775	150215789	GIMAP4 (-51083), GIMAP7 (+1364)
chr8	8200372	8206726	ENSG00000182319 (+40459), ZNF705B (+402405)
chr6	14275982	14278316	JARID2 (-969378), CD83 (+159277)
chr22	37879739	37882927	ELFN2 (-57828), MFNG (+1106)
chr8	134085147	134089582	WISP1 (-115917), SLA (-14762)
chr3	152938773	152940704	ARHGEF26 (-899053), RAP2B (+59710)
chr9	86911454	86911955	SLC28A3 (+43893), RMI1 (+315992)
chr17	80356721	80358712	HEXDC (-18477), UTS2R (+25564)
chr6	29932142	29934362	ZNRD1 (-95779), HLA-A (+24215)
chr4	169550399	169560534	PALLD (+137212), CBR4 (+375942)
chr7	106357806	106359961	NAMPT (-433246), PIK3CG (-147040)
chr21	43607238	43608758	ABCG1 (-31230), UMODL1 (+116572)
chr6	149352499	149354659	TAB2 (-288609), UST (+285115)
chr12	51787432	51788609	SLC4A8 (-30534), GALNT6 (-10674)
chr14	21249108	21250307	RNASE6 (+498)
chr1	160737529	160738338	LY9 (-28014), SLAMF7 (+28879)
chr22	29206942	29207724	ZNRF3 (-72247), XBP1 (-10748)
chr7	150146062	150150942	GIMAP8 (+784)
chr1	172326748	172330768	PIGC (+84468), DNM3 (+518137)
chr6	166901204	166902596	MPC1 (-105414), RPS6KA2 (+374139)
chr3	16353204	16354304	OXNAD1 (+47048), RFTN1 (+201459)
chr12	113414246	113419249	OAS2 (+548)
chr19	10222648	10223572	P2RY11 (+896)
chr17	62704380	62705539	SMURF2 (-46774), LRRC37A3 (+209943)
chr2	231523476	231525458	CAB39 (-53093), SP100 (+243486)
chr1	27070030	27071647	PIGV (-43847), ARID1A (+48315)
chr5	131801662	131803042	IRF1 (+24138), SLC22A5 (+96908)
chr16	50314614	50316189	ADCY7 (+14975), BRD7 (+87288)
chr6	2857239	2859407	SERPINB1 (-16083), SERPINB9 (+45191)

chr20	61370631	61373226	MRGBP (-55876), NTSR1 (+31740)
chr20	56202272	56204589	ZBP1 (-7902), PMEPA1 (+81527)
chr1	205252951	205255498	NUAK2 (+36658), TMCC2 (+56921)
chr6	24742423	24744319	GMNN (-31795), C6orf62 (-22307)
chr14	69245506	69249867	ZFP36L1 (+12270), RAD51B (+961162)
chr1	59485073	59486675	FGGY (-276779), JUN (-236089)
chr6	152622518	152623786	SYNE1 (+335382), ESR1 (+611521)
chr12	113415315	113418047	OAS2 (+481)

**Supplementary Table 1-4. SCC down-regulated H3K27ac peaks and their target genes**

**chrom:** chromosome in hg19

**start:** peak start position in hg19

**end:** peak end position in hg19

**target:** putative target gene(s) from GREAT analysis, gene (distance to the peak)

SCC-downregulated H3K27ac peaks			
Chr	Start	End	Target
chr19	708232	710793	PALM (+412)
chr14	102025515	102026611	DIO3 (-1625)
chr19	58609118	58610487	ZSCAN18 (+19990), ZNF135 (+39196)
chr5	146614123	146614782	STK32A (-73)
chr1	61508727	61509483	C1orf87 (-969663), NFIA (-38429)
chr7	1506062	1507057	MICALL2 (-7422), INTS1 (+37443)
chr1	212780243	212783293	ATF3 (-244)
chr19	707261	711910	PALM (+485)
chr1	61515633	61517522	C1orf87 (-977136), NFIA (-30956)
chr14	37641219	37641987	SLC25A21 (+468)
chr9	87282833	87287560	NTRK2 (+1731)
chr8	12808716	12810028	KIAA1456 (+6186), DLC1 (+563023)
chr6	157557065	157558357	TMEM242 (+186922), ARID1B (+458648)
chr12	131531476	131533762	SFSWAP (-663063), GPR133 (+94167)
chr11	130747932	130748433	SNX19 (+38221), C11orf44 (+205332)
chr19	58608078	58610893	ZSCAN18 (+20307), ZNF135 (+38879)
chr3	173115182	173116085	NLGN1 (-604)
chr2	191044786	191046363	C2orf88 (-14)
chr17	15689240	15690065	ADORA2B (-158578), TBC1D26 (+54062)
chrX	47060199	47060700	INE1 (-3870)
chr16	49872691	49873192	CNEP1R1 (-185379), ZNF423 (-16292)
chr17	41984314	41984815	MPP2 (+548)
chr20	2672779	2673280	EBF4 (-494)
chr21	36041566	36044059	CLIC6 (+1125), RUNX1 (+378828)
chr1	65612861	65614983	AK4 (+409)
chr9	87282403	87288187	NTRK2 (+1829)
chr14	69726401	69729556	GALNT16 (+1298), ERH (+137365)
chr2	211089455	211090133	ACADL (+421)
chr10	118501615	118502844	HSPA12A (-145)
chr17	15689175	15690371	ADORA2B (-158458), TBC1D26 (+54182)
chr22	43114858	43117405	A4GALT (-25140), ARFGAP3 (+137276)
chr1	212777596	212783981	ATF3 (-1223)
chr10	115999168	115999669	VWA2 (+401)
chr2	96050796	96051423	FAHD2A (-17364), KCNIP3 (+88058)
chr1	115825638	115826139	TSPAN2 (-193804), NGF (+54968)
chr3	126074972	126075985	KLF15 (+806)
chr19	6108140	6111260	RFX2 (+845)
chr14	101999292	102002832	DIO3 (-26626), ENSG00000269375 (+641797)
chr5	146613374	146615111	STK32A (-283)
chr14	37640830	37642333	SLC25A21 (+489)
chr11	1580088	1580589	MOB2 (-72363), DUSP8 (+12811)
chr2	152954021	152955909	CACNB4 (+628)
chr9	88419752	88421086	NAA35 (-135642), AGTPBP1 (-63686)
chr14	75742267	75746707	FOS (-990)
chr11	63258417	63258918	HRASLS5 (-2)
chr7	116311745	116312930	MET (-121)
chr3	153838744	153840651	ARHGEF26 (+906)
chr12	131753109	131753610	SFSWAP (-442322), GPR133 (+314908)



chr10	118030073	118033924	GFRA1 (+980)
chr20	43374290	43374931	KCNK15 (+190)
chr8	12808274	12810745	KIAA1456 (+6324), DLC1 (+562885)
chr11	65373899	65374400	KCNK7 (-10683), MAP3K11 (+7563)
chr8	1921986	1922907	MYOM2 (-70708), ARHGEF10 (+150305)
chr8	91996841	91998100	TMEM55A (+55821), NECAB1 (+193693)
chr9	34589094	34590706	CNTFR (-165)
chr2	287500	290082	FAM150B (-495)
chr22	46422501	46423961	PPARA (-123268), WNT7B (-50222)
chr7	51383596	51385111	COBL (+142)
chr21	33782794	33786708	EVA1C (+62)
chr17	29345	31109	DOC2B (+1200)
chr10	123871601	123874849	PLEKHA1 (-260987), TACC2 (+124516)
chr2	237562939	237563440	COPS8 (-430765), ACKR3 (+84906)
chr12	54772184	54773868	GPR84 (-14755), ZNF385A (+12056)
chr5	63461508	63462299	RNF180 (+195)
chr20	62323261	62324016	TNFRSF6B (-4382)
chr5	1539209	1541447	LPCAT1 (-16236), MRPL36 (+259681)
chr1	162517942	162519332	UAP1 (-12686), UHMK1 (+51004)
chr19	45970433	45973963	FOSB (+945)
chr20	4021682	4022394	SMOX (-107388), RNF24 (-25822)
chr11	69191168	69191669	CCND1 (-264436), TPCN2 (+375054)
chr6	89855280	89857171	PM20D2 (+457)
chr19	39833327	39834715	SAMD4B (+913)
chr21	33781776	33788316	EVA1C (+357)
chr1	11846815	11852883	MTHFR (+13453), AGTRAP (+53637)
chr21	36040841	36044634	CLIC6 (+1050), RUNX1 (+378903)
chr12	52442584	52452944	C12orf44 (-15991), NR4A1 (+31148)
chr19	847632	849064	ELANE (-2666)
chr12	54768810	54771452	GPR84 (-11860), ZNF385A (+14951)
chr1	2064917	2066869	C1orf86 (+60320), PRKCZ (+83984)
chr16	1428687	1429726	GNPTG (+27283), UNKL (+35485)
chr17	19482632	19483329	ALDH3A2 (-69083), SLC47A1 (+45814)
chr14	104015399	104019617	BAG5 (+11127), TRMT61A (+21987)
chr12	52429240	52431973	C12orf44 (-33148), NR4A1 (+13991)
chr9	129873203	129874722	ANGPTL2 (+11199), RALGPS1 (+196910)
chr12	52455865	52457011	C12orf44 (-7317), NR4A1 (+39822)
chr19	3374354	3376331	NFIC (+8759), C19orf77 (+105197)
chr14	103985731	103989036	CKB (+2064), MARK3 (+135527)
chr22	43039289	43046166	CYB5R3 (-2213)
chr1	48462467	48463423	TRABD2B (-378)
chr3	173112820	173113756	NLGN1 (-2950)
chr12	131529378	131536009	SFSWAP (-662988), GPR133 (+94242)
chr8	74004677	74005906	SBSPON (+215)
chr2	218843068	218844322	RUFY4 (-90283), TNS1 (-34844)
chr2	232467407	232471661	PTMA (-103692), NMUR1 (-74328)
chr1	204119856	204121760	ETNK2 (+323)
chr15	76014988	76017117	UBE2Q2 (-119573), CSPG4 (-10864)
chr12	52448335	52448836	C12orf44 (-15169), NR4A1 (+31970)
chr17	16958353	16960384	MPRIP (+13295), PLD6 (+150260)
chr6	89854852	89857665	PM20D2 (+490)
chr15	86315394	86316189	KLHL25 (+22469), AKAP13 (+391832)
chr1	61508326	61509719	C1orf87 (-969581), NFIA (-38511)
chr10	99160139	99161145	RRP12 (+458)
chr8	81784930	81787165	ZNF704 (+968)
chr12	52443355	52445895	C12orf44 (-19130), NR4A1 (+28009)

chr6	119399234	119400558	FAM184A (+12)
chr21	44845738	44846842	SIK1 (+718)
chr6	19836829	19839643	ID4 (+619)
chr6	36964187	36967016	MTCH1 (-11528), FGD2 (-7821)
chr5	7802312	7802813	FASTKD3 (+66552), ADCY2 (+406242)
chr12	95942143	95942785	USP44 (+2802), METAP2 (+74737)
chr1	6347807	6349048	GPR153 (-27393), ACOT7 (+97445)
chr8	106329696	106332517	ZFPM2 (+187)
chr3	12328612	12330661	TIMP4 (-128786), PPARG (-63334)
chr19	5040794	5042035	KDM4B (+72283), PTPRS (+299399)
chr18	24235784	24237535	KCTD1 (-107261), AQP4 (+209122)
chr7	100047969	100048595	PPP1R35 (-14094), TSC22D4 (+28620)
chr6	157555978	157559161	TMEM242 (+187063), ARID1B (+458507)
chr6	36964669	36967556	MTCH1 (-12039), FGD2 (-7310)
chr1	112532407	112535206	KCND3 (-2030)
chr9	99380084	99382622	CDC14B (+759)
chr22	50340866	50351375	PIM3 (-8040), CRELD2 (+33838)
chr2	286811	290447	FAM150B (-333)
chr6	90121169	90123074	RRAGD (-133)
chr10	733628	735598	DIP2C (+993)
chr5	38555807	38558012	LIFR (+38596), EGFLAM (+298399)
chr1	196577149	196578679	KCNT2 (-415)
chr9	14345627	14353849	NFIB (-36072), ZDHHC21 (+343731)
chr2	71205525	71206313	TEX261 (+16156), ATP6V1B1 (+42907)
chr6	32013958	32015421	TNXB (-785)
chr6	56707596	56709058	KIAA1586 (-203020), DST (-200533)
chr12	50202188	50203847	BCDIN3D (+33894), TMBIM6 (+67426)
chr8	110655343	110658195	SYBU (+47251), EBAG9 (+104363)
chr10	13570195	13570696	PRPF18 (-58481), BEND7 (-25470)
chr3	184321647	184322652	VPS8 (-207781), EPHB3 (+42578)
chr19	41192804	41193482	NUMBL (+3413), LTBP4 (+90002)
chr11	108463287	108464478	EXPH5 (+491)
chr10	97173649	97174483	PDLIM1 (-123285), SORBS1 (+147069)
chr17	11501842	11502343	DNAH9 (+345)
chr1	204052543	204053857	SOX13 (+10468), ETNK2 (+67931)
chr10	115406275	115406776	NRAP (+17360), HABP2 (+93741)
chr18	29303731	29304605	B4GALT6 (-39482), SLC25A52 (+36675)
chr10	11059280	11061104	CEL2F2 (+299)
chr10	11864929	11866063	ECHDC3 (+81131), UPF2 (+212400)
chr6	132331969	132332792	CTGF (-59868), MOXD1 (+390303)
chr7	45128231	45128732	NACAD (+31)
chr7	30173828	30177090	ZNRF2 (-148464), PLEKHA8 (+107430)
chr9	88418882	88421755	NAA35 (-135742), AGTPBP1 (-63586)
chr10	123870860	123876482	PLEKHA1 (-260541), TACC2 (+124962)
chr8	101524951	101525687	RNF19A (-209832), ANKRD46 (+46651)
chr8	106329081	106332784	ZFPM2 (+13)
chr4	5206860	5207361	C4orf6 (-319772), STK32B (+153942)
chr14	75389344	75389845	RPS6KL1 (+410)
chr16	30750468	30751218	PHKG2 (-8748), SRCAP (+40381)
chr2	121101025	121105203	INHBB (-605)
chr20	48181890	48185277	KCNB1 (-84400), PTGIS (+1099)
chr17	47591411	47594017	NXPH3 (-60506), NGFR (+20059)
chr10	118500459	118503081	HSPA12A (+315)
chr1	91869664	91870691	HFM1 (+248)
chr16	85469415	85471290	GSE1 (-176469), KIAA0513 (+373535)
chr3	126373515	126374016	TXNRD3 (+232)

chr2	238535617	238536947	LRRFIP1 (-64700), RAB17 (-36546)
chr2	121100341	121106049	INHBB (-524)
chr13	21277171	21278711	IL17D (+459)
chr10	97175147	97175918	PDLIM1 (-124752), SORBS1 (+145602)
chr6	151560760	151562650	AKAP12 (+571)
chr19	40847581	40848285	AKT2 (-56631), PLD3 (-6659)
chr7	1505231	1509462	MICALL2 (-8209), INTS1 (+36656)
chr8	141642225	141646535	AGO2 (+1338), CHRAC1 (+122983)
chr16	85607470	85608631	GSE1 (-38771), KIAA0513 (+511233)
chr2	201450081	201452608	AOX1 (+754)
chr22	48885798	48886299	FAM19A5 (+777)
chr13	52342719	52345371	DHRS12 (+34214), WDFY2 (+185401)
chr10	118029350	118034722	GFRA1 (+943)
chr14	101997409	102003199	DIO3 (-27384), ENSG00000269375 (+641039)
chr2	96012713	96013214	FAHD2A (-55510), KCNIP3 (+49912)
chr6	32074680	32082527	TNXB (-64699), ATF6B (+17413)
chr6	138482418	138482919	KIAA1244 (-389)
chr11	76463179	76464525	LRRC32 (-82808), TSKU (-38944)
chr10	92921739	92923944	ANKRD1 (-241809), PCGF5 (-57703)
chr1	3432579	3434432	ARHGEF16 (+62516), MEGF6 (+94553)
chr17	78044533	78045726	GAA (-30373), CCDC40 (+34695)
chr20	33145915	33148115	MAP1LC3A (+12357), PIGU (+117874)
chr19	1150582	1157092	SBNO2 (+20445), GPX4 (+49901)
chr19	13179352	13182337	LYL1 (+32836), NFIX (+74423)
chr7	906116	908025	GET4 (-9118), SUN1 (+34933)
chr2	73114504	73115005	SPR (+266)
chr2	85980630	85982911	ATOH8 (+754)
chr12	96183417	96185521	NTN4 (+67)
chr9	71939175	71940311	FAM189A2 (-4498)
chr19	718241	719918	MISP (-32046), PALM (+9979)
chr5	179778732	179780381	GFPT2 (+830)
chr10	70319928	70321078	TET1 (+90)
chr6	147829163	147829664	STXBP5 (+303745)
chr19	675163	681208	FSTL3 (+1794), PRSS57 (+17274)
chr3	142442721	142443862	TRPC1 (+376)
chr15	68876944	68877597	CORO2B (+5698), ANP32A (+235963)
chr22	38378955	38380851	SOX10 (+641)
chr4	186063900	186064713	SLC25A4 (-88)
chr5	137802986	137803650	EGR1 (+2139), ETF1 (+75671)
chr13	31479792	31482715	MEDAG (+926)
chr7	28447300	28450741	CREB5 (-3123)
chr15	68870683	68872541	CORO2B (+39)
chr11	130479170	130480391	C11orf44 (-63070), ADAMTS15 (+160912)
chr20	48363745	48365168	SLC9A8 (-64793), B4GALT5 (-34042)
chr7	79081251	79084070	MAGI2 (+229)
chr8	27849778	27850279	SCARA5 (+215)
chr17	15686072	15686573	ADORA2B (-161908), TBC1D26 (+50732)
chr2	211089156	211090713	ACADL (+280)
chr3	48466490	48466991	SPINK8 (-96910), PLXNB1 (+4131)
chr5	38554652	38558266	LIFR (+39047), EGFLAM (+297948)
chr21	40278330	40280018	ETS2 (+101943), PSMG1 (+276603)
chr2	152953496	152956570	CACNB4 (+560)
chr1	26131314	26131961	SEPN1 (+4971), AUNIP (+54265)
chr17	7283599	7285066	TNK1 (+177)
chr18	48085850	48086351	MAPK4 (-347)
chr6	32055130	32056357	TNXB (-41839), ATF6B (+40273)

chr8	22224522	22225891	SLC39A14 (+445)
chr22	43087468	43088774	CYB5R3 (-47606), A4GALT (+2871)
chr8	143781018	143782506	LY6K (+233)
chr16	88119974	88124377	ZNF469 (-371703), BANP (+118552)
chr18	20714717	20717973	CABLES1 (+618)
chr11	43963597	43965719	ACCSL (-104873), ALKBH3 (+62269)
chr1	65612234	65617601	DNAJC6 (-160310), AK4 (+1405)
chrX	102862141	102864238	TCEAL3 (+811)
chr14	94254479	94255470	PRIMA1 (-148)
chr6	17280880	17282537	RBM24 (+132)
chr8	110654581	110658793	SYBU (+47333), EBAG9 (+104281)
chr19	3093729	3100980	GNA15 (-38836), GNA11 (+2947)
chr8	28226738	28227467	ZNF395 (+16880), PNOC (+52454)
chr19	460028	460660	SHC2 (+652)
chr17	36849552	36850179	SRCIN1 (-87683), MLLT6 (-11929)
chr21	38352773	38353439	RIPPLY3 (-25757), HLCS (-14333)
chr10	3954108	3954739	AKR1E2 (-914022), KLF6 (-126957)
chr19	41727677	41728358	HNRNPUL1 (-42218), AXL (+2910)
chr1	3418740	3419241	ARHGEF16 (+48001), MEGF6 (+109068)
chr7	86688337	86688964	KIAA1324L (+364)
chr6	91004869	91007405	BACH2 (+324)
chr7	30736778	30737440	CRHR2 (+2610), GARS (+102812)
chr2	220146395	220146896	DNAJB2 (+2657), PTPRN (+27649)
chr3	193987842	193992107	CPN2 (+82082), HES1 (+136041)
chr19	5291567	5293769	PTPRS (+48146), KDM4B (+323536)
chr8	144952754	144953255	EPPK1 (-373)
chrX	144899771	144900272	SLITRK2 (+333)
chr12	52457643	52458841	C12orf44 (-5513), NR4A1 (+41626)
chr19	15890289	15890790	OR10H5 (-14221), OR10H3 (+38337)
chr10	45070872	45071373	TMEM72 (-335525), CXCL12 (-190626)
chr14	104189371	104190717	ZFYVE21 (+7977), PPP1R13B (+123883)
chr18	45554194	45555102	SMAD2 (-97136), ZBTB7C (+137289)
chr11	8083610	8084697	TUB (+23974), RIC3 (+106382)
chr4	186455928	186457109	PDLIM3 (+143)
chr7	103630282	103630783	RELN (-570)
chrX	149530711	149535820	MTM1 (-203803), MAMLD1 (+1580)
chr1	184598696	184599197	EDEM3 (+125100), TSEN15 (+578136)
chr7	151156952	151157986	RHEB (+59541), NUB1 (+118672)
chr18	11688822	11690169	GNAL (+541)
chr17	17600021	17600522	RAI1 (+15485), SREBF1 (+140029)
chr19	32619263	32619902	TSHZ3 (-779130), ZNF507 (-216917)
chr1	24763901	24764928	RCAN3 (-64972), NIPAL3 (+22131)
chr8	145925263	145926011	ARHGAP39 (-94553), ZNF251 (+55353)
chr19	717795	721768	MISP (-31344), PALM (+10681)
chr9	139948447	139950467	ENTPD2 (-960)
chr19	16507662	16513215	EPS15L1 (+72384), KLF2 (+74811)
chr19	7293189	7295096	INSR (-98)
chr10	18429840	18430341	CACNB2 (+485)
chr2	120063360	120064727	DBI (-60785), STEAP3 (+82637)
chr19	33685790	33686447	LRP3 (+629)
chr12	122070725	122071385	TMEM120B (-79646), ORA1 (+6600)
chr6	151646703	151647204	ZBTB2 (+65729), AKAP12 (+85820)
chr10	99477337	99478405	ZFYVE27 (-20363), MARVELD1 (+4390)
chr6	149210545	149211046	TAB2 (-431392), UST (+142332)
chr2	236578080	236580610	AGAP1 (+176594), GBX2 (+497667)
chr6	90119790	90123329	RRAGD (+429)

chr19	3027727	3029223	TLE2 (+690)
chr3	76359571	76361644	ROBO2 (+404762)
chr17	9141971	9145717	NTN1 (+218985), STX8 (+335709)
chr22	23597826	23600640	BCR (+76836), IGLL1 (+323262)
chr22	41763175	41764974	TEF (-13858), ZC3H7B (+66549)
chr1	47271382	47273540	CYP4B1 (+7743), CYP4A11 (+134676)
chr1	112531399	112535481	KCND3 (-1663)
chr15	100881777	100882278	ADAMTS17 (+182)
chr17	19204903	19205530	B9D1 (+60809), EPN2 (+64563)
chr11	63530324	63530825	MARK2 (-75825), RTN3 (+81620)
chr3	180587633	180588468	CCDC39 (-190763), FXR1 (-42039)
chr9	33349757	33350258	AQP7 (+52509), NFX1 (+59499)
chr11	125034838	125035497	PKNOX2 (+566)
chr7	130969153	130971115	KLF14 (-551246), MKLN1 (-42485)
chr17	36618585	36627032	ARHGAP23 (+38147), SRCIN1 (+139374)
chr15	57668286	57670338	CGNL1 (+609)
chr6	19836295	19841485	ID4 (+1273), MBOAT1 (+373740)
chr16	71756732	71758108	PHLPP2 (+1184), MARVELD3 (+97330)
chr4	139903378	139904013	SLC7A11 (-740193), CCRN4L (-33247)
chr19	13186243	13191224	LYL1 (+24947), NFIX (+82312)
chr16	2517626	2518641	NTN3 (-3366)
chr16	70714166	70716712	MTSS1L (+4530), IL34 (+101641)
chr11	68080112	68082868	PPP6R3 (-146748), LRP5 (+1413)
chr14	76454769	76455270	GPATCH2L (-163259), IFT43 (+2895)
chr11	121611635	121613335	SORL1 (+289573), BLID (+374438)
chr9	35563613	35564114	TESK1 (-41503), RUSC2 (+25235)
chr9	22447265	22447959	DMRTA1 (+772)
chrX	101967285	101968337	GPRASP2 (+554)
chr1	10700568	10701627	CASZ1 (+155607), PEX14 (+166154)
chr13	31478893	31483707	MEDAG (+972)
chr9	14339803	14354451	NFIB (-33461), ZDHHC21 (+346342)
chr1	37920257	37921500	GRIK3 (-421153), ZC3H12A (-19274)
chr14	69725918	69732625	GALNT16 (+2591), ERH (+136072)
chr12	95941403	95943242	USP44 (+2943), METAP2 (+74596)
chr15	62360449	62361078	C2CD4A (+1588), C2CD4B (+96718)
chrX	150863626	150864127	PRRG3 (-2902)
chr19	46050565	46051448	OPA3 (+37093), VASP (+40333)
chr8	141639397	141641296	AGO2 (+5371), CHRAC1 (+118950)
chr19	3047034	3048326	TLE2 (-18515), AES (+15425)
chr2	241930261	241939352	SNED1 (-3448)
chr22	24447475	24448989	SUSD2 (-128995), CABIN1 (+40364)
chr4	24913208	24915188	SOD3 (+117113), LGI2 (+118303)
chr2	241855368	241858770	ENSG00000226321 (-4917)
chr8	98289554	98290181	TSPYL5 (+308)
chr2	191043735	191048814	C2orf88 (+686)
chr12	33049296	33050250	PKP2 (-83)
chr7	30179322	30179823	ZNRF2 (-144350), PLEKHA8 (+111544)
chr19	3535995	3538018	FZR1 (+14019), MFSD12 (+20394)
chrX	149530465	149536120	MTM1 (-203776), MAMLD1 (+1607)
chr8	144904579	144907031	SCRIB (-8256), PUF60 (+6224)
chr8	17657165	17661197	MTUS1 (-1004)
chr11	130476305	130477000	C11orf44 (-66198), ADAMTS15 (+157784)
chr10	115998781	116000661	VWA2 (+703)
chr15	91175794	91176295	BLM (-84513), CRT3 (+102745)
chr6	170495008	170495642	DLL1 (+104236), C6orf70 (+343604)
chr22	43111929	43117933	A4GALT (-23939), ARFGAP3 (+138477)

chr2	63286686	63287325	OTX1 (+9069), WDPCP (+528927)
chr16	49892348	49893749	CNEP1R1 (-165272), ZNF423 (-36399)
chr7	56183709	56184210	CHCHD2 (-9691)
chr2	241929239	241929740	SNED1 (-8765), ENSG00000226321 (+67504)
chr17	81064325	81065313	METRNL (+27252)
chr8	145115188	145116389	OPLAH (-205)
chr13	113597279	113598337	MCF2L (-25727), ATP11A (+253165)
chr12	53460102	53460603	IGFBP6 (-30876), TENC1 (+17620)
chr22	38377512	38378013	SOX10 (+2781), POLR2F (+28093)
chr16	19179346	19180176	SYT17 (+190)
chr8	27795049	27795550	PBK (-99688), SCARA5 (+54944)
chr10	119296254	119297928	EMX2 (-4864)
chr6	32049262	32050772	TNXB (-36112), ATF6B (+46000)
chr19	5288180	5294551	PTPRS (+49448), KDM4B (+322234)
chr18	11688809	11690508	GNAL (+704)
chr16	90015512	90016013	DEF8 (+580)
chr2	43258847	43260971	HAO (-240177), ZFP36L2 (+193839)
chr16	85469118	85471765	GSE1 (-176380), KIAA0513 (+373624)
chr5	2739110	2741457	IRX4 (-852952), IRX2 (+11492)
chr12	120662325	120664173	RPLP0 (-24347), PXN (+40314)
chr1	61514262	61524636	C1orf87 (-980007), NFIA (-28085)
chr7	95401660	95402480	DYNC1I1 (+168)
chr11	67133862	67134803	POLD4 (-13316), CLCF1 (+6875)
chr5	3602277	3602778	IRX1 (+6360)
chr5	38448708	38449336	LIFR (+146484), EGFLAM (+190511)
chr1	247274400	247275651	ZNF669 (-7352), ZNF124 (+60292)
chr11	68167306	68167807	PPP6R3 (-60681), LRP5 (+87480)
chr10	79631179	79634225	KCNMA1 (-235302), DLG5 (+53582)
chr9	130712127	130713567	DPM2 (-12084), NAIF1 (+116753)
chr12	52424888	52441653	C12orf44 (-30484), NR4A1 (+16655)
chr1	48461015	48463728	TRABD2B (+195)
chr14	67999476	68000805	PLEKHH1 (+123)
chr17	77924929	77925430	CBX4 (-111952), TBC1D16 (+84467)
chr11	121611260	121614301	SORL1 (+289869), BLID (+374142)
chr2	42274329	42279172	EML4 (-119739), PKDCC (+1591)
chr17	75859763	75861799	TNRC6C (-140356), SEPT9 (+583289)
chr1	221785500	221786001	DUSP10 (+129767), HLX (+734052)
chrX	84499180	84499681	ZNF711 (+393)
chr18	24235204	24237921	KCTD1 (-107164), AQP4 (+209219)
chr5	171862874	171865462	UBTD2 (-153093), SH3PXD2B (+17359)
chr19	3055217	3058250	TLE2 (-27569), AES (+6371)
chr11	107985590	107986397	ACAT1 (-6249), CUL5 (+106535)
chr15	45477537	45480871	SHF (+14169), DUOX1 (+57073)
chr11	125820339	125820840	DDX25 (+46332), CDON (+112597)
chr11	34035439	34036071	LMO2 (-121919), CAPRIN1 (-37475)
chr15	64338150	64338651	DAPK2 (-5935), FAM96A (+47816)
chr2	241926191	241928420	SNED1 (-10949), ENSG00000226321 (+65320)
chr1	41846177	41849194	FOXO6 (+20092), EDN2 (+102656)
chr7	140062454	140062955	JHDM1D (-185870), SLC37A3 (+35644)
chr6	33595793	33596294	ITPR3 (+7902), MNF1 (+83460)
chr8	1920934	1923428	MYOM2 (-70974), ARHGEF10 (+150039)
chr6	119416858	119417359	FAM184A (-17201), MAN1A1 (+253817)
chr10	733346	737090	DIP2C (+388)
chr1	17899686	17900366	ACTL8 (-181782), ARHGEF10L (+33696)
chr17	19482165	19484146	ALDH3A2 (-68908), SLC47A1 (+45989)
chr17	53342369	53344411	HLF (+1017), MMD (+155963)

chr11	8039715	8041984	TUB (-19330), EIF3F (+49052)
chr16	90113606	90114107	URAHP (+324)
chr17	80061211	80062905	SLC16A3 (-129505), FASN (-5850)
chr16	15489396	15490447	MPV17L (+286), ENSG00000261130 (+311)
chr17	2273206	2273707	MNT (+30955), SGSM2 (+32651)
chr13	114739968	114741357	GAS6 (-173623), RASA3 (+157423)
chr14	104005072	104005573	TRMT61A (+9802), BAG5 (+23312)
chr22	29602042	29602713	EMID1 (+538)
chr2	27665104	27665989	KRTCAP3 (+314)
chr16	49862462	49863099	CNEP1R1 (-195540), ZNF423 (-6131)
chr19	1143546	1158955	SBNO2 (+23031), GPX4 (+47315)
chr10	115802950	115803581	ADRB1 (-540)
chr14	104047912	104048413	KLC1 (-47415), APOPT1 (+18864)
chr21	33822617	33824514	EVA1C (+38877), TCP10L (+134277)
chr3	126710902	126711403	PLXNA1 (+3716), TPRA1 (+598459)
chr1	20810483	20814050	CAMK2N1 (+446)
chr17	36897960	36899099	PCGF2 (+7540), CISD3 (+12042)
chr6	151560464	151562857	AKAP12 (+527)
chr12	131437907	131440096	GPR133 (+550)
chr9	71939266	71941455	FAM189A2 (-3880)
chr21	44807037	44807538	SIK1 (+39720), CRYAA (+218170)
chr22	43033018	43033519	POLDIP3 (-22301), ATP5L2 (+3338)
chr16	1427070	1430762	GNPTG (+26992), UNKL (+35776)
chr12	124888181	124888878	NCOR2 (+91268), ZNF664 (+430860)
chr3	153838317	153842051	ARHGGEF26 (+1392), DHX36 (+202102)
chr9	99378377	99382672	CDC14B (+1587), HABP4 (+168038)
chr3	142442546	142444484	TRPC1 (+599)
chr5	63460770	63462708	RNF180 (+30)
chr16	2879714	2880681	ZG16B (+28)
chr19	55622470	55626452	PPP1R12C (+4466), EPS8L1 (+37192)
chr12	96182589	96185883	NTN4 (+300)
chrX	152965678	152966179	SLC6A8 (+12375), BCAP31 (+23620)
chr1	960036	961065	AGRN (+5048), RNF223 (+49136)
chr21	45344960	45345461	AGPAT3 (+322)
chr19	1239164	1240992	C19orf26 (-2052), ATP5D (-1671)
chr12	123627264	123628636	PITPNM2 (-32975), MPHOSPH9 (+78491)
chr5	3594519	3599759	IRX1 (+971)
chr19	15891478	15891979	OR10H5 (-13032), OR10H3 (+39526)
chr8	27559055	27561227	ESCO2 (-71762), SCARA3 (+68443)
chr1	7765390	7765891	VAMP3 (-65688), CAMTA1 (+920257)
chr16	67334984	67336200	PLEKHG4 (+24179), KCTD19 (+25074)
chr17	56012634	56013957	MRPS23 (-85879), VEZF1 (+52217)
chr16	56664812	56668095	MT1M (+309)
chr1	27740769	27741270	GPR3 (+21872), WASF2 (+75649)
chr3	12837511	12839162	CAND2 (+158)
chr16	56665559	56667315	MT1M (+292)
chr8	74004016	74006259	SBSPON (+369)
chr4	186130418	186132001	SNX25 (+5819), LRP2BP (+168942)
chr9	129851205	129853258	ANGPTL2 (+32930), RALGPS1 (+175179)
chr2	945843	947213	SNTG2 (-26)
chr9	101727948	101728449	TGFBR1 (-139172), COL15A1 (+22278)
chr2	27717406	27718632	GCKR (-1690), FNDC4 (+93)
chr19	3092948	3101962	GNA15 (-38736), GNA11 (+3047)
chr1	91869242	91870919	HFM1 (+345)
chr10	114765168	114765669	HABP2 (-547366), TCF7L2 (+55410)
chr2	239229059	239229967	TRAF3IP1 (+431)

chr20	44977636	44979074	CDH22 (-98021), SLC35C2 (+13458)
chr1	202100242	202102782	GPR37L1 (+9526), ARL8A (+12357)
chr12	86105294	86105975	RASSF9 (+124713), ALX1 (+431750)
chr1	196576714	196579600	KCNT2 (-658)
chr13	45953874	45954549	TPT1 (-38707), SLC25A30 (+38303)
chr3	140834938	140835439	ACPL2 (-115481), SPSB4 (+64945)
chr2	10594224	10594725	ODC1 (-5845), NOL10 (+235618)
chr1	27912786	27913287	WASF2 (-96368), AHDC1 (+17106)
chr4	186455587	186457803	PDLIM3 (-33)
chr6	32038249	32038750	TNXB (-24595), ATF6B (+57517)
chr22	17082081	17083761	CCT8L2 (-9221), XKR3 (+219668)
chr18	5628491	5629159	EPB41L3 (-84584), TMEM200C (+267129)
chr19	46032028	46032529	VASP (+21605), OPA3 (+55821)
chr20	13201102	13203138	ISM1 (-298)
chr13	78492228	78494270	EDNRB (+654)
chr3	186665797	186666559	ST6GAL1 (+17904), RPL39L (+191133)
chr3	57197984	57199112	IL17RD (+855)
chrX	99986622	99987123	SYTL4 (-351)
chr9	137230827	137231654	COL5A1 (-302379), RXRA (+12815)
chr17	21260651	21261152	KCNJ12 (-18607), MAP2K3 (+72918)
chr1	15239479	15241088	TMEM51 (-238744), KAZN (+315084)
chr16	67977598	67979257	LCAT (-394)
chr1	6351266	6352674	GPR153 (-30935), ACOT7 (+93903)
chr17	80693052	80694245	FN3K (+198)
chr4	152579808	152580465	PET112 (+102038), PRSS48 (+381814)
chr2	56150173	56151037	EFEMP1 (+669)
chr17	25866907	25868761	LGALS9 (-88990), KSR1 (+68798)
chr12	52453043	52459500	C12orf44 (-7483), NR4A1 (+39656)
chr20	13976021	13976731	MACROD2 (+361)
chr13	113644555	113653438	F7 (-111124), MCF2L (+25462)
chr17	56401777	56402551	MPO (-43868), BZRAP1 (+3281)
chr1	228335945	228339572	GJC2 (+206)
chr14	55150146	55154358	SAMD4A (+117617), GCH1 (+217318)
chr1	30663301	30664372	MATN1 (+532597)
chr12	100377905	100379231	ANKS1B (-553)
chr5	38465607	38469717	LIFR (+127844), EGFLAM (+209151)
chr5	115152160	115153037	CDO1 (+52)
chr17	77015877	77017307	C1QTNF1 (-3661)
chr6	168840932	168842991	SMOC2 (+131)
chr19	21769046	21769547	ZNF429 (+80931), ZNF100 (+181133)
chr10	11911759	11912487	ECHDC3 (+127758), UPF2 (+165773)
chr19	16504666	16518313	EPS15L1 (+71333), KLF2 (+75862)
chr7	36405924	36407637	ANLN (-22634), EEPD1 (+214023)
chr14	102022374	102027010	DIO3 (-2996)
chr5	179778332	179781518	GFPT2 (+462)
chr17	78932683	78934287	CHMP6 (-32156), RPTOR (+414417)
chr7	4921314	4923354	PAPOLB (-20709), RADIL (+1016)
chr1	10745676	10746520	CASZ1 (+110607), PEX14 (+211154)
chr1	57110638	57111948	PRKAA2 (+298)
chr13	45955192	45956595	TPT1 (-40389), SLC25A30 (+36621)
chr22	43304137	43304638	ARFGAP3 (-50980), PACSIN2 (+106763)
chr6	16239176	16240336	GMPR (+945)
chr10	95753646	95754147	PLCE1 (+151)
chr22	38643018	38643519	TMEM184B (+25771), MAFF (+45380)
chr8	81784605	81788779	ZNF704 (+324)
chr2	9532475	9533588	ITGB1BP1 (+30326), ASAP2 (+186138)



chr1	61519137	61520656	C1orf87 (-980455), NFIA (-27637)
chr7	28995158	28996600	CHN2 (-238149), CREB5 (+543735)
chr6	84743679	84744180	MRAP2 (+455)
chr20	48202887	48203388	PTGIS (-18455), B4GALT5 (+127277)
chr15	40803501	40804311	RPUSD2 (-57593), CHST14 (+40746)
chr18	29264321	29265936	B4GALT6 (-443)
chr2	241924734	241942409	SNED1 (-4683)
chr1	10057336	10058283	RBP7 (+536)
chr17	47590277	47594701	NXPH3 (-60731), NGFR (+19834)
chr22	38494792	38495293	SLC16A8 (-15894), BAIAP2L2 (+11634)
chr6	7172976	7174056	RREB1 (+65475), SSR1 (+139924)
chr8	22084936	22085784	POLR3D (-17388), BMP1 (+63111)
chrX	118107966	118111119	LONRF3 (+830)
chrX	101967070	101968763	GPRASP2 (+660)
chr9	119424504	119426005	PAPPA-AS1 (-262370), TRIM32 (-24326)
chr11	68452161	68452662	GAL (+469)
chr2	241907682	241908352	SNED1 (-30238), ENSG00000226321 (+46031)
chr12	131404347	131406170	GPR133 (-33193), RAN (+48835)
chr16	33293899	33294656	TP53TG3B (+32763)
chr7	74291048	74291549	GTF2IRD2 (-23452), WBSCR16 (+198330)
chr13	52342267	52347312	DHRS12 (+33469), WDFY2 (+186146)
chr14	75384063	75384898	RPS6KL1 (+5524), DLST (+35885)
chr1	2063504	2068696	C1orf86 (+60113), PRKCZ (+84191)
chr8	38613841	38615540	FGFR1 (-289328), TACC1 (-30031)
chr17	8577867	8578368	MYH10 (-44039), MFSD6L (+124549)
chr5	153380754	153381255	FAM114A2 (+37474), GRIA1 (+509273)
chr22	34535561	34536062	ISX (-926317), LARGE (-219403)
chr1	17252057	17252823	CROCC (+3995), MFAP2 (+54890)
chr5	7394101	7397388	ADCY2 (-576)
chr1	14925527	14926028	KAZN (+578)
chr9	91148766	91149555	C9orf47 (-456682), SPIN1 (+145827)
chr21	42688382	42688883	FAM3B (-28)
chr18	48085530	48087629	MAPK4 (+132)
chr1	17302762	17303263	MFAP2 (+4317), CROCC (+54568)
chr19	41105701	41106337	LTBP4 (+2878), NUMBL (+90537)
chr3	126073282	126076990	ALDH1L1 (-175107), KLF15 (+1149)
chr19	3027333	3029965	TLE2 (+516)
chr8	27559148	27561227	ESCO2 (-71715), SCARA3 (+68490)
chr9	130707757	130708501	DPM2 (-7366), NAIF1 (+121471)
chr6	11213561	11215297	ERVFRD-1 (-102464), NEDD9 (+18486)
chr12	52450031	52450532	C12orf44 (-13473), NR4A1 (+33666)
chr11	62688248	62689432	CHRM1 (+313)
chr1	162524452	162524953	UAP1 (-6620), UHMK1 (+57070)
chr17	19244980	19246059	B9D1 (+20506), EPN2 (+104866)
chr12	124852879	124856661	NCOR2 (+125028), ZNF664 (+397100)
chr1	20809838	20814028	CAMK2N1 (+780)
chr17	19174027	19174528	EPN2 (+33624), B9D1 (+91748)
chr5	80530555	80531056	ZCCHC9 (-66616), CKMT2 (+1663)
chr7	30595851	30596690	GGCT (-51811), GARS (-38026)
chr2	242503649	242504150	BOK (+5764), THAP4 (+72964)
chr8	145725947	145730000	GPT (-1491)
chr17	19216139	19216640	B9D1 (+49636), EPN2 (+75736)
chr9	34588858	34595043	CNTFR (-2216)
chr2	85359895	85362927	TCF7L1 (+878)
chr7	51381641	51385971	COBL (+690)
chr15	70381112	70381613	TLE3 (+9152), RPLP1 (+636240)

chr2	237795340	237795841	COPS8 (-198364), ACKR3 (+317307)
chr12	13043725	13045387	GPRC5A (+840)
chr9	123656388	123657506	PHF19 (-17341), TRAF1 (+34100)
chr8	17354477	17356857	MTMR7 (-84831), SLC7A2 (-40619)
chr1	3454836	3457474	MEGF6 (+71904), ARHGEF16 (+85165)
chr16	2171265	2173482	NTHL1 (-74507), PKD1 (+13525)
chr14	92350380	92352806	TC2N (-17720), FBLN5 (+62574)
chr3	173112510	173117496	NLGN1 (-1235)
chr22	23597410	23601555	BCR (+77086), IGLL1 (+323012)
chr18	29303331	29305041	B4GALT6 (-39500), SLC25A52 (+36657)
chr17	75859128	75863055	TNRC6C (-140045), SEPT9 (+583600)
chr10	353421	354123	ZMYND11 (+173348), DIP2C (+381834)
chr2	217850623	217851907	TNP1 (-126478), TNS1 (+957586)
chr5	106930097	106930598	EFNA5 (+76248)
chr4	164264588	164265806	NPY5R (-57)
chr8	81610219	81610846	ZNF704 (+176483), ZBTB10 (+212631)
chr9	71962067	71962568	FAM189A2 (+18077), APBA1 (+324904)
chr21	45348046	45350086	TRAPP10 (-83134), AGPAT3 (+4177)
chr7	95178449	95180817	PDK4 (+46170), ASB4 (+64420)
chr9	131390263	131391482	WDR34 (+28193), SPTAN1 (+76004)
chr3	123167187	123169187	ADCY5 (+418)
chr13	103051808	103053452	FGF14 (+1494), ITGEB1 (+947664)
chr17	81062300	81063287	METRNL (+25227)
chr1	203447972	203448655	OPTC (-14957), PRELP (+3358)
chr7	228178	232590	FAM20C (+37415), PDGFA (+328647)
chr11	19585619	19586705	E2F8 (-322995), NAV2 (-148981)
chr5	172328719	172329753	RPL26L1 (-56660), ERGIC1 (+67958)
chr17	53342118	53345641	HLF (+1507), MMD (+155473)
chr4	187065989	187066939	CYP4V2 (-46210), TLR3 (+76158)
chr8	145117633	145119478	OPLAH (-2972)
chr6	32013633	32019002	TNXB (-2413)
chr19	5308471	5309385	PTPRS (+31886), KDM4B (+339796)
chr1	14924483	14926274	KAZN (+179)
chr2	240628705	240629422	HDAC4 (-306421), NDUFA10 (+335755)
chr1	33733821	33735645	ZNF362 (+12559), A3GALT2 (+51966)
chr10	79625144	79625645	KCNMA1 (-227995), DLG5 (+60889)
chr15	99498734	99499235	PGPEP1L (+49806), IGF1R (+306785)
chr1	47214740	47218317	CYP4B1 (-48189), EFCAB14 (-31793)
chr19	15889922	15892320	OR10H5 (-13640), OR10H3 (+38918)
chr7	4920948	4923706	PAPOLB (-20702), RADIL (+1023)
chr14	92365557	92366058	TC2N (-31935), FBLN5 (+48359)
chr15	83315921	83316981	CPEB1 (+277)
chr3	126546805	126547525	PLXNA1 (-160272), CHCHD6 (+124102)
chr17	70111477	70116580	SOX9 (-3132)
chr19	18769025	18771899	CRTC1 (-24026), TMEM59L (+52222)
chr5	784311	785497	ZDHHC11B (-17837), ZDHHC11 (+66197)
chr5	92956646	92957508	NR2F1 (+38034), POU5F2 (+120266)
chr12	122116829	122117478	TMEM120B (-33547), ORAI1 (+52699)
chr7	95401422	95402696	DYNC1I1 (+157)
chr1	41845046	41849571	FOXO6 (+19715), EDN2 (+103033)
chr7	4742259	4743342	AP5Z1 (-72452), FOXK1 (+20861)
chr10	134227374	134227875	INPP5A (-123699), STK32C (-106181)
chr6	17280381	17283087	RBM24 (+157)
chr11	77733478	77734639	KCTD14 (+281)
chrX	83442012	83443689	RPS6KA6 (+64)
chr8	144951172	144951824	NRBP2 (-28352), EPPK1 (+1134)

chr13	110874012	110874641	IRS2 (-435412), COL4A1 (+85169)
chr1	26351293	26351794	EXTL1 (+3273), SLC30A2 (+21080)
chr16	85406576	85407077	GSE1 (-239995), KIAA0513 (+310009)
chr18	5628058	5631063	EPB41L3 (-85320), TMEM200C (+266393)
chr2	23608752	23609253	ATAD2B (+540981)
chr14	105933388	105935682	CRIP2 (-4764)
chr1	232315729	232316419	SIPA1L2 (+381230), DISC1 (+553513)
chr13	44792622	44794031	SERP2 (-154651), SMIM2 (-57934)
chr19	5059809	5060310	KDM4B (+90928), PTPRS (+280754)
chr14	69753617	69754118	GALNT16 (+27187), ERH (+111476)
chr5	81152957	81153753	ATG10 (-114489), SSBP2 (-106283)
chr5	38416363	38417700	EGFLAM (+158521), LIFR (+178474)
chr1	179555353	179555989	NPHS2 (-10603), TDRD5 (-5354)
chr1	10726299	10726800	CASZ1 (+130155), PEX14 (+191606)
chr10	126840151	126842098	C10orf137 (-567020), CTBP2 (-124666)
chr1	3112597	3113098	ARHGEF16 (-258142), PRDM16 (+127073)
chr7	74290739	74291526	GTF2IRD2 (-23286), WBSCR16 (+198496)
chr1	234952782	234953919	IRF2BP2 (-208080), TOMM20 (+338900)
chr3	52480145	52480646	SEMA3G (-1353)
chr22	17081603	17084719	CCT8L2 (-9461), XKR3 (+219428)
chr6	160461889	160462390	SLC22A1 (-80681), IGF2R (+72009)
chr6	138482186	138484314	KIAA1244 (+192)
chr22	23545738	23547660	BCR (+24302), IGLL1 (+375796)
chr6	35036313	35036814	TCP11 (+72860), ANKS1A (+179522)
chr15	76013001	76018102	UBE2Q2 (-120074), CSPG4 (-10363)
chr1	156441737	156442238	C1orf61 (-42804), MEF2D (+28632)
chr5	131700303	131700804	SLC22A5 (-4890)
chr18	42323129	42323630	SLC14A2 (-871386), SETBP1 (+62517)
chr9	133719832	133720333	QRFP (+49142), ABL1 (+130750)
chr9	34591215	34591927	CNTFR (-1836)
chr2	689829	690606	SNTG2 (-256336), TMEM18 (-12779)
chr12	52437394	52440451	C12orf44 (-24832), NR4A1 (+22307)
chr17	19301077	19301826	RNF112 (-13055), MFAP4 (-10949)
chr8	125677523	125678024	MTSS1 (+62896), NDUFB9 (+126430)
chr7	73300420	73301817	ELN (-141000), WBSCR28 (+25630)
chr20	32281450	32282132	E2F1 (-7581), PXMP4 (+26315)
chr5	3593108	3607363	IRX1 (+4068)
chr11	130477546	130478369	C11orf44 (-64893), ADAMTS15 (+159089)
chr10	7708309	7710064	ITIH5 (-253)
chr11	63256526	63259263	HRASLS5 (+771)
chr5	56749404	56749905	ACTBL2 (+28981), GPBP1 (+239707)
chr13	112101341	112104424	SOX1 (-619030), TEX29 (+129868)
chr9	35790401	35792331	NPR2 (-785)
chr1	10797539	10798870	CASZ1 (+58500), PEX14 (+263261)
chr13	114739885	114741503	GAS6 (-173654), RASA3 (+157392)
chr10	126687459	126691678	CTBP2 (+26890), ZRANB1 (+58877)
chr1	47213693	47218713	CYP4B1 (-48515), EFCAB14 (-31467)
chr1	57109593	57112088	PRKAA2 (-154)
chr8	37671437	37673887	GPR124 (+17888), BRF2 (+34760)
chr15	76469361	76472169	C15orf27 (+118587), ETFA (+133045)
chr10	47653660	47654161	ANTXRL (-4323)
chr9	98810746	98811390	ERCC6L2 (+173085), HSD17B3 (+253366)
chr15	65378176	65381377	KBTBD13 (+10623), PDCD7 (+46397)
chr12	11859843	11860478	BCL2L14 (-363712), ETV6 (+57373)
chr15	67485996	67486784	AAGAB (+60684), SMAD3 (+128207)
chr11	11170124	11170625	ZBED5 (-290755), CSNK2A3 (+204529)

chr21	22370442	22370943	NCAM2 (+60)
chr3	53879216	53880574	IL17RB (-712), CHDH (+522)
chr3	50306407	50306908	LSMEM2 (-9800), GNAI2 (+33274)
chr4	82135532	82136621	PRKG2 (+111)
chr9	100263737	100265421	TMOD1 (+1117), TSTD2 (+131278)
chr17	2315793	2316498	MNT (-11734), METTL16 (+99034)
chr20	56014764	56017019	RBM38 (+49429), CTCFL (+84271)
chr5	1131391	1131892	SLC6A19 (-70068), SLC12A7 (-19492)
chr17	1952859	1954482	HIC1 (-5933), OVCA2 (+8344)
chr7	905560	910306	GET4 (-8256), SUN1 (+35795)
chr1	47220843	47221344	CYP4B1 (-43624), EFCAB14 (-36358)
chr13	113597234	113598753	MCF2L (-25541), ATP11A (+253351)
chr21	45356335	45357419	TRAPP10 (-75323), AGPAT3 (+11988)
chr12	54767503	54768205	GPR84 (-9583), ZNF385A (+17228)
chr11	43962658	43967439	ACCSL (-104482), ALKBH3 (+62660)
chr17	16924568	16925556	TNFRSF13B (-49660), MPRIP (-21012)
chr19	8458145	8460387	MARCH2 (-24023), RAB11B (+4183)
chr15	68901731	68902232	CORO2B (+30409), ANP32A (+211252)
chr1	201463193	201466300	PHLDA3 (-26435), CSRP1 (+13837)
chr2	85388468	85388969	TCF7L1 (+28186), TGOLN2 (+166428)
chr13	25024959	25025460	PARP4 (+61738), C1QTNF9 (+143906)
chr22	38374675	38385210	SOX10 (+601)
chr6	11755629	11756415	ADTRP (+23014), TMEM170B (+217511)
chr14	105400007	105400508	PLD4 (+9098), AHNAK2 (+44436)
chr2	171571668	171572499	SP5 (+223)
chr22	19946720	19947435	TXNRD2 (-17745), ARVCF (+57253)
chr2	236341736	236342653	AGAP1 (-60556), SH3BP4 (+454866)
chr20	43372255	43375469	KCNK15 (-559)
chr16	33293753	33294962	TP53TG3B (+32843)
chr11	121975944	121976729	BLID (+10586), SORL1 (+653425)
chr11	114127642	114129766	NNMT (+151)
chr18	20713483	20718973	CABLES1 (+501)
chr1	228562955	228563456	TRIM11 (+31335), OBSCN (+167375)
chr10	43446319	43449123	RET (-124754), BMS1 (+169472)
chr19	32616501	32617149	TSHZ3 (-776372), ZNF507 (-219675)
chr2	121301887	121302388	GLI2 (-247847), INHBB (+198419)
chr19	4742691	4743372	FEM1A (-48696), DPP9 (-19157)
chr17	2288412	2289089	MNT (+15661), SGSM2 (+47945)
chr17	40715798	40716862	MLX (-2760)
chr19	13149277	13151936	NFIX (+44185), LYL1 (+63074)
chr2	171627157	171627658	GAD1 (-45664), SP5 (+55547)
chr10	134277453	134279360	STK32C (-156963), INPP5A (-72917)
chr2	42272784	42282277	EML4 (-118959), PKDCC (+2371)
chr1	46654044	46654545	LURAP1 (-14711), TSPAN1 (+13536)
chr13	35516038	35517206	NBEA (+198)
chr11	126062231	126062732	CDON (-129295), RPU5D4 (+19105)
chr7	84814663	84816438	SEMA3D (-64300)
chr10	119309867	119310505	EMX2 (+8231), RAB11FIP2 (+495928)
chr6	89870987	89871488	PM20D2 (+15469), GABRR1 (+55914)
chr2	85359338	85365070	TCF7L1 (+1671), TGOLN2 (+192943)
chr20	44455027	44456201	TNNC2 (+366)
chr9	14343368	14345095	NFIB (-30566), ZDHHC21 (+349237)
chr9	140131308	140132543	TUBB4B (-3739)
chr1	204051245	204051883	SOX13 (+8832), ETNK2 (+69567)
chr17	16961583	16962084	MPRIP (+15760), PLD6 (+147795)
chr8	134501120	134501788	NDRG1 (-191625), ST3GAL1 (+82729)

chr1	6346934	6353066	GPR153 (-28965), ACOT7 (+95873)
chr3	42884189	42889451	CYP8B1 (+30813), ACKR2 (+35852)
chr1	115725969	115726641	TSPAN2 (-94220), NGF (+154552)
chr20	44098932	44099742	WFDC2 (+991)
chr11	126253175	126254724	ST3GAL4 (-21727), DCPS (+80303)
chr14	22806466	22807519	DAD1 (+251182), OR4E2 (+673696)
chr22	48884450	48888653	FAM19A5 (+1280)
chr20	48502914	48505047	SPATA2 (+26295), SLC9A8 (+74731)
chr12	124880861	124882229	NCOR2 (+98253), ZNF664 (+423875)
chr11	30605847	30608713	MPPED2 (-5237), DCDC1 (+784041)
chr13	102067873	102068890	NALCN (+324)
chr19	459331	462710	SHC2 (-25)
chr7	86688055	86689889	KIAA1324L (+43)
chr3	194014408	194015380	CPN2 (+57163), HES1 (+160960)
chr8	12966650	12967611	KIAA1456 (+163945), DLC1 (+405264)
chr17	47653233	47654921	NXP3 (+857)
chr2	242837997	242838937	CXXC11 (+26586)
chr19	52227494	52228415	HAS1 (-734)
chr1	92032667	92038008	CDC7 (+68673), TGFBR3 (+316449)
chr13	113703203	113704013	F7 (-56513), MCF2L (+80073)
chr16	57316997	57319163	PLL2 (+519)
chr1	202098327	202104669	GPR37L1 (+9512), ARL8A (+12371)
chr7	45127318	45129453	NACAD (+127)
chr14	94254423	94256403	PRIMA1 (-586)
chr19	5915791	5916550	CAPS (+1924), RANBP3 (+61980)
chr14	101984201	101988252	DIO3 (-41461), ENSG00000269375 (+626962)
chr16	29213860	29214520	NPIP11 (+201160), LAT (+218043)
chr1	12608371	12610652	DHRS3 (+68225), TNFRSF1B (+382452)
chr7	63505842	63506480	ZNF727 (+340)
chr6	32073664	32088022	TNXB (-66938), ATF6B (+15174)
chr6	46458053	46459963	RCAN2 (+91)
chr9	129860781	129861553	ANGPTL2 (+23995), RALGPS1 (+184114)
chr19	50650737	50651704	VRK3 (-122018), IZUMO2 (+15231)
chr2	23746833	23747474	ATAD2B (+402830)
chr11	3148729	3149230	CARS (-70313), OSBPL5 (+37604)
chr17	53665273	53665774	MMD (-166171), TMEM100 (+143958)
chr3	184310383	184311475	VPS8 (-219002), EPHB3 (+31357)
chr12	50201577	50205433	BCDIN3D (+33407), TM6SF2 (+67913)
chrX	118107714	118111323	LONRF3 (+806)
chr7	28444655	28451552	CREB5 (-4040)
chr6	32046660	32057508	TNXB (-38179), ATF6B (+43933)
chr9	119417617	119418289	PAPPA-AS1 (-255068), TRIM32 (-31628)
chr22	32021568	32022971	PISD (+1937), SFI1 (+129721)
chr17	42195634	42196135	HDAC5 (+5121), G6PC3 (+47782)
chr7	30957792	30958702	GHRHR (-45391), AQP1 (+6777)
chr1	44009504	44010005	KDM4A (-106074), PTPRF (+13208)
chr7	130126000	130126879	CEP41 (-45362), MEST (-5494)
chr9	136149964	136151563	OBP2B (-66136), SURF6 (+52471)
chr2	23607308	23610307	ATAD2B (+541176)
chr5	168418534	168419035	PANK3 (-412180), SLIT3 (+309348)
chr2	217858352	217858853	TNP1 (-133816), TNS1 (+950248)
chr10	97166785	97169945	PDLIM1 (-117584), SORBS1 (+152770)
chr7	79080904	79089412	MAGI2 (-2268)
chr1	11854536	11855037	MTHFR (+8515), AGTRAP (+58575)
chr17	28040	32637	DOC2B (+1088)
chr1	54755730	54756744	C1orf191 (+52527), SSBP3 (+115855)

chrX	144898799	144900597	SLITRK2 (+9)
chr19	47108362	47109288	PPP5D1 (-4368), CALM3 (+4332)
chr18	29263996	29266220	B4GALT6 (-422)
chr1	17901456	17902914	ACTL8 (-179623), ARHGEF10L (+35855)
chr1	120279311	120280848	PHGDH (+25570), HMGCS2 (+31437)
chr15	68881731	68882695	CORO2B (+10640), ANP32A (+231021)
chr1	12613318	12614124	DHRS3 (+64016), TNFRSF1B (+386661)
chr10	24703309	24705964	KIAA1217 (+206544), ARHGAP21 (+307960)
chr1	201461026	201461800	PHLDA3 (-23101), CSRP1 (+17171)
chr4	2257171	2259544	HAUS3 (-14498), MXD4 (+5663)
chr19	11009181	11010486	CARM1 (+27645), YIPF2 (+29495)
chr7	225883	232568	FAM20C (+36257), PDGFA (+329805)
chr9	72658517	72659809	MAMDC2 (+666)
chr3	112947239	112948098	BOC (+17340), SPICE1 (+286334)
chr15	39764508	39766224	RASGRP1 (-908359), THBS1 (-107928)
chr3	127795786	127796643	SEC61A1 (+25003), RUVBL1 (+46452)
chr1	17857774	17860415	RCC2 (-92875), ARHGEF10L (-7235)
chr7	158861515	158862016	VIPR2 (+75883), WDR60 (+212497)
chr4	8248921	8249837	HTRA3 (-22113), SH3TC1 (+48285)
chr22	34315404	34316548	LARGE (+433)
chr1	55446218	55446884	TMEM61 (+86)
chr1	10699638	10702031	CASZ1 (+155870), PEX14 (+165891)
chr6	11216167	11216668	ERVFRD-1 (-104453), NEDD9 (+16497)
chr11	30606650	30608529	MPPED2 (-5547), DCDC1 (+783731)
chr8	125590904	125591405	NDUFB9 (+39811), MTSS1 (+149515)
chr19	33555347	33555848	RHPN2 (+196)
chr1	48175338	48175839	FOXD2 (+273900), TRABD2B (+286978)
chr1	47973964	47974866	FOXD2 (+72726), TRABD2B (+488152)
chr1	156443671	156448222	C1orf61 (-46763), MEF2D (+24673)
chr20	48196400	48197100	PTGIS (-12067), B4GALT5 (+133665)
chr19	13177134	13178816	LYL1 (+35706), NFIX (+71553)
chr6	152127899	152130915	ESR1 (+117776), SYNE1 (+829127)
chr3	57196790	57199564	ARHGEF3 (-84841), IL17RD (+1226)
chr17	71345239	71346553	CDC42EP4 (-37582), SDK2 (+294332)
chr13	102068039	102069541	NALCN (-84)
chr15	99497298	99497938	PGPEP1L (+51173), IGF1R (+305418)
chr22	41813652	41814984	TOB2 (+28709), TEF (+36385)
chr13	21283324	21284704	IL17D (+6532), N6AMT2 (+64074)
chr3	134369383	134370024	KY (+160)
chr2	9538136	9540694	ITGB1BP1 (+23943), ASAP2 (+192521)
chr17	75734340	75735253	TNRC6C (-266340), SEPT9 (+457305)
chr11	64602883	64603952	MEN1 (-24652), CDC42BPG (+8623)
chr19	21504574	21505936	ZNF708 (+6957), ZNF431 (+180412)
chr5	672518	673185	TPPP (+20658), CEP72 (+60465)
chr6	43639227	43640070	MRPS18A (+15879), RSPH9 (+26866)
chr22	22288133	22288634	MAPK1 (-66465), PPM1F (+18825)
chr17	1927673	1929300	DPH1 (-4917), RTN4RL1 (-309)
chr10	97237088	97240919	PDLIM1 (-188223), SORBS1 (+82131)
chr2	217858091	217859991	TNP1 (-134254), TNS1 (+949810)
chr3	142607249	142608617	PCOLCE2 (+112)
chr21	44861034	44861535	SIK1 (-14277), HSF2BP (+218089)
chr2	239199611	239201050	PER2 (-3081)
chr22	38619115	38619979	MAFF (+21658), TMEM184B (+49493)
chr1	3431092	3436779	ARHGEF16 (+62946), MEGF6 (+94123)
chr14	101019560	101021545	WARS (-177411), BEGAIN (+13854)
chr3	52877422	52877923	MUSTN1 (-8438), TMEM110 (+53939)

chr1	95582599	95583254	ENSG00000271092 (-552), TMEM56 (+33)
chr4	152581031	152581532	PET112 (+100893), PRSS48 (+382959)
chr16	84967192	84968247	ZDHHC7 (+77388), CRISPLD2 (+114130)
chr16	74356713	74357545	NPIP15 (-54647), PSMD7 (+26456)
chr2	11622352	11623633	GREB1 (-51249), E2F6 (-16718)
chr6	110677465	110680872	METTL24 (+306)
chr17	70109168	70122028	SOX9 (-1563)
chr3	190580362	190581201	GMNC (-378)
chr9	139534896	139535705	NOTCH1 (-94987), EGFL7 (-18007)
chr14	103668487	103668988	EIF5 (-131601), TNFAIP2 (+78940)
chr17	80692562	80695019	FN3K (+340)
chr3	184314537	184320898	VPS8 (-212213), EPHB3 (+38146)
chr1	204117877	204122254	ETNK2 (+1065), SOX13 (+77334)
chr2	237561495	237564049	COPS8 (-431183), ACKR3 (+84488)
chr11	124054090	124054591	OR10D3 (-1582)
chr9	110257409	110257910	KLF4 (-5733)
chr10	28966419	28967746	BAMBI (+812)
chr1	228132873	228133374	WNT9A (+2475), PRSS38 (+129730)
chr3	180587271	180588714	CCDC39 (-190705), FXR1 (-42097)
chr20	2106102	2108054	TGM3 (-169569), STK35 (+24821)
chr14	27326624	27327125	NOVA1 (-259915)
chr1	217262668	217263533	ESRRG (-366306), GPATCH2 (+541323)
chr8	17639119	17639759	MTUS1 (+18738), PDGFRL (+205497)
chr5	105024024	105024525	NONE
chr4	9002325	9003245	FAM90A26 (-169350), HMX1 (-129242)
chr19	22805593	22806094	ZNF98 (-200696), ZNF492 (-11282)
chr14	55143042	55144690	SAMD4A (+109231), GCH1 (+225704)
chr11	66682405	66683338	PC (+42975), LRFN4 (+57899)
chr17	41004118	41004853	G6PC (-48329), AOC3 (+1285)
chr12	48178439	48181586	SLC48A1 (+13022), HDAC7 (+33555)
chr8	1112844	1114537	TDRP (-617910), DLGAP2 (-335841)
chr18	35157191	35158361	CELFA4 (-11776)
chr14	25517654	25519761	STXBP6 (+795)
chr3	196757719	196758220	MF12 (-1283)
chr17	17729670	17730171	SREBF1 (+10380), RAI1 (+145134)
chr19	5127573	5129265	KDM4B (+159287), PTPRS (+212395)
chr17	2898744	2900476	OR1D5 (+67291), RAP1GAP2 (+199878)
chr15	35014229	35015107	GOLGA8B (-138897), GJD2 (+32498)
chr10	118515384	118516028	ENO4 (-93317), HSPA12A (-13621)
chr1	65990694	65994094	PDE4B (-265803), LEPR (+106059)
chr3	13635808	13636309	FBLN2 (+45428), WNT7A (+285559)
chr1	109137859	109138360	HENMT1 (+66038), NBPFF6 (+219689)
chr22	50735042	50735838	MAPK11 (-26618), PLXNB2 (+10616)
chr3	184294812	184297525	VPS8 (-233762), EPHB3 (+16597)
chr13	99112007	99112508	RNF113B (-282739), STK24 (+61994)
chr2	201450076	201455972	BZW1 (-224055), AOX1 (+2433)
chr17	80109777	80111624	SLC16A3 (-80862), FASN (-54493)
chr8	145925041	145926269	ARHGAP39 (-94571), ZNF251 (+55335)
chr1	62534177	62534678	KANK4 (+250657), INADL (+326279)
chr8	63160421	63162618	NKAIN3 (+19)
chr14	75389062	75390243	RPS6KL1 (+352)
chr9	137174403	137175304	RXRA (-43572), WDR5 (+173644)
chr1	54736601	54748854	C1orf191 (+39018), SSBP3 (+129364)
chr17	80421587	80422088	FOXK2 (-55753), NARF (+5356)
chr17	37367954	37369209	RPL19 (+12046), STAC2 (+13543)
chr2	43223759	43229533	HAAO (-206914), ZFP36L2 (+227102)

chr2	171626504	171628537	GAD1 (-45551), SP5 (+55660)
chr21	32902953	32903454	KRTAP19-8 (-492409), TIAM1 (+28086)
chr10	121125798	121126299	GRK5 (+158948), RGS10 (+176171)
chr17	79058753	79059752	BAIAP2 (+50291), AATK (+80564)
chr17	73701417	73701918	RECQL5 (-38399), ITGB4 (-15848)
chr7	151156227	151159883	RHEB (+58955), NUB1 (+119258)
chr11	1568027	1568528	MOB2 (-60302), DUSP8 (+24872)
chr5	168431430	168431931	PANK3 (-425076), SLIT3 (+296452)
chr3	12975995	12976687	RPL32 (-93254), IQSEC1 (+32827)
chr9	140094115	140094616	TPRN (+884)
chr5	38809192	38810934	LIFR (-214557), OSMR (-36038)
chr10	95192880	95193381	MYOF (+48820), CYP26A1 (+359484)
chr9	129866110	129867267	ANGPTL2 (+18473), RALGPS1 (+189636)
chr9	136149759	136151737	OBP2B (-66120), SURF6 (+52487)
chr2	121309913	121310414	GLI2 (-239821), INHBB (+206445)
chr17	73809300	73809990	UNK (+28793), UNC13D (+31153)
chr7	98665107	98665608	SMURF1 (+76365), TRRAP (+189245)
chr3	125931893	125932541	ALDH1L1 (-32188), KLF15 (+144068)
chr9	137307049	137307550	COL5A1 (-226320), RXRA (+88874)
chr19	8048076	8048885	TIMM44 (-39676), ELAVL1 (+22011)
chr4	164264419	164266041	NPY5R (-24)
chr19	21768801	21770265	ZNF429 (+81167), ZNF100 (+180897)
chr2	120129201	120129702	TMEM37 (-59993), DBI (+4623)
chr15	89452624	89453125	HAPLN3 (-14018), MFGE8 (+3767)
chr1	12606227	12611125	DHRS3 (+69061), TNFRSF1B (+381616)
chr2	945387	947592	SNTG2 (-64)
chr10	88739444	88740980	ADIRF (+12263), GLUD1 (+114411)
chr1	228131970	228136931	WNT9A (+1148), PRSS38 (+131057)
chr1	56052305	56053037	USP24 (-371885), PPAP2B (+992570)
chr12	108440287	108440964	WSCD2 (-84902), ASCL4 (+272464)
chr12	131750626	131754108	SFSWAP (-443315), GPR133 (+313915)
chr2	100937245	100939207	LONRF2 (+969)
chr4	187064893	187067663	CYP4V2 (-46396), TLR3 (+75972)
chr12	110774927	110775428	ATP2A2 (+55692), ANAPC7 (+66357)
chr10	24702862	24706720	KIAA1217 (+206698), ARHGAP21 (+307806)
chr6	50816890	50818656	TFAP2B (+31337)
chr19	46806460	46807401	PPP5C (-43320), HIF3A (+6628)
chr3	193999979	194001502	CPN2 (+71316), HES1 (+146807)
chr1	203476727	203478101	ATP2B4 (-118275), OPTC (+14143)
chr20	48201013	48202093	PTGIS (-16870), B4GALT5 (+128862)
chr7	151380308	151381465	RHEB (-163877), PRKAG2 (+193323)
chr4	103932792	103933450	SLC9B1 (+7775), CISD2 (+142986)
chr6	3381748	3382249	TUBB2B (-154030), SLC22A23 (+74794)
chr14	68541656	68542476	RAD51B (+255541), ZFP36L1 (+717891)
chr16	15489239	15490802	MPV17L (+385), ENSG00000261130 (+410)
chr12	100377605	100379524	ANKS1B (-550)
chr2	31462009	31462705	EHD3 (+5154), XDH (+175224)
chr19	11079487	11079988	LDLR (-120300), SMARCA4 (+8061)
chr8	97674857	97675595	CPQ (+17771), TSPYL5 (+614950)
chr14	104003522	104004223	TRMT61A (+8352), BAG5 (+24762)
chr6	37647918	37649480	CCDC167 (-181001), MDGA1 (+17067)
chr7	100063171	100065331	PPP1R35 (-30063), TSC22D4 (+12651)
chr12	117797998	117799602	NOS1 (-29921), KSR2 (+607988)
chr3	187896817	187897318	BCL6 (-433553), LPP (-33653)
chr22	49049820	49050321	FAM19A5 (+164799)
chr9	35793917	35794418	NPR2 (+2017), SPAG8 (+18101)



chr3	195962625	195963311	SLC51A (+19593), PCYT1A (+51616)
chr11	67983575	67984208	SUV420H1 (-3010)
chr20	48601720	48602406	SNAI1 (+2527), UBE2V1 (+130428)
chr11	61672869	61692774	FADS3 (-23816), RAB3IL1 (+2175)
chr6	41394601	41398578	FOXP4 (-117574), NCR2 (+93063)
chr17	15685923	15686815	ADORA2B (-161862), TBC1D26 (+50778)
chr8	145114728	145119690	OPLAH (-1625)
chr1	182175986	182176712	ZNF648 (-145502), GLUL (+184992)
chr21	42878544	42880645	TMPRSS2 (+397)
chr20	1312321	1313228	SDCBP2 (-2892)
chr11	113929401	113932677	ZBTB16 (+724)
chr22	38393897	38394398	PICK1 (-59059), SOX10 (-13604)
chr18	31157547	31158404	ASXL3 (-620)
chrX	17878406	17878907	RAI2 (+800)
chr12	54170106	54170607	HOXC13 (-162178), CALCOCO1 (-49133)
chr5	3590647	3592243	IRX1 (-4723)
chr17	21111660	21112846	TMEM11 (+5684), DHRS7B (+82288)
chr12	52314595	52315096	ACVR1B (-30639), ACVRL1 (+13644)
chr3	3841260	3842732	LRRN1 (+875)
chr1	14467082	14467726	KAZN (-457796), PRDM2 (+436054)
chr16	88118559	88128314	ZNF469 (-370442), BANP (+119813)
chr6	44029478	44032312	TMEM63B (-63756), VEGFA (+292451)
chr2	87641583	87642467	PLGLB2 (-405581), PLGLB1 (-393050)
chr4	54751682	54752630	LNX1 (-294373), CHIC2 (+178701)
chr5	159474579	159475080	TTC1 (+38710), PWWP2A (+71600)
chr2	238499140	238500416	RAB17 (-42)
chr9	100319532	100320033	TMOD1 (+56321), TSTD2 (+76074)
chr3	194941972	194943048	LSG1 (-549304), XXYLT1 (+49386)
chr1	21594830	21595825	EIF4G3 (-91985), ECE1 (+21654)
chr19	17435101	17435730	ANO8 (+10222), MRPL34 (+18939)
chr3	9903805	9904911	RPUSD3 (-18658), CIDEC (+15837)
chr5	131712229	131712730	SLC22A5 (+7036), IRF1 (+114010)
chr14	104187568	104188069	ZFYVE21 (+5752), PPP1R13B (+126108)
chr11	61682451	61682952	FADS3 (-23696), RAB3IL1 (+2295)
chr3	45062474	45062975	CLEC3B (-4950)
chr1	47073442	47073943	MKNK1 (-3807)
chr3	193921739	193922402	HES1 (+68137), CPN2 (+149986)
chr14	23615131	23615950	CEBPE (-26716), SLC7A8 (+37308)
chr9	38004170	38004839	SLC25A51 (-100398), SHB (+64703)
chr3	123166061	123169482	ADCY5 (+833)
chr17	47598195	47598696	NXPH3 (-54774), NGFR (+25791)
chr12	125325988	125327512	NCOR2 (-346952), SCARB1 (+21643)
chr5	692327	694594	TPPP (+49)
chr1	228194680	228195716	WNT3A (+446)
chr14	90258997	90260726	FOXN3 (-174388), EFCAB11 (+161171)
chr2	30912184	30912935	CAPN13 (+117752), LCLAT1 (+242437)
chr15	93631384	93632377	RGMA (-14789)
chr15	100913260	100914079	ADAMTS17 (-31460), CERS3 (+171255)
chr21	33244828	33246510	HUNK (+41)
chr7	27147491	27148477	HOXA2 (-5554), HOXA3 (+11230)
chr6	50793111	50795867	TFAP2B (+8053)

**Supplementary Table 2-1. BCC-UP-H3K27ac**

CHST11	chr12:104871481-104873181
TUBGCP5	chr15:22448341-22449034
PDGFD	chr11:104575424-104576662
SDK1	chr7:3132233-3132734
RASA1	chr5:86417337-86417838
STK17B	chr2:197127182-197127994
COMT	chr22:19878420-19880541
RICTOR	chr5:39176978-39177706
CECR5	chr22:17699725-17700226
SPOCD1	chr1:32354799-32355522
TGFBR1	chr9:101819307-101822442
LCP2	chr5:169723413-169725687
LRTM1	chr3:55519129-55522574
FLI1	chr11:128480585-128481620
COG6	chr13:40351299-40351800
AMIGO2	chr12:47670022-47671507
SLA	chr8:134151205-134152602
IKZF1	chr7:50307013-50308538
COL3A1	chr2:189466055-189466682
VMP1	chr17:57841368-57842237
IRF2BP2	chr1:234907247-234909773
SLA	chr8:134164132-134165796
MTAP	chr9:21558385-21560043
SLC7A5	chr16:87928245-87931608
CCM2	chr7:45066503-45068093
ZNF414	chr19:8634371-8636559
C1QTNF3	chr5:34498630-34500034
PPIF	chr10:81082003-81082910
PRR3	chr6:30476909-30477781
THBS2	chr6:169434925-169435907
NOX4	chr11:89112637-89115967
CAB39	chr2:231526038-231526900
VMP1	chr17:57838144-57840866
TRAF3IP3	chr1:209941066-209943913
H2AFY	chr5:134769405-134770284
PLCG2	chr16:81501996-81504508
AHR	chr7:17624999-17625500
GPR39	chr2:132426825-132427790
ENSG0000018231	chr8:8202300-8205236
LPCAT1	chr5:1792884-1793557
CDK5R1	chr17:30878085-30878782
MYO1F	chr19:8641191-8642437
LRRRC8D	chr1:90222323-90224442
ABI3	chr17:47294547-47297199
APCDD1	chr18:10139931-10140675
TOX2	chr20:42569624-42572221
RAP2B	chr3:152861923-152864061
CLVS1	chr8:61841481-61842166
HIF1A	chr14:62127566-62130225
COG6	chr13:40350062-40350563
SLAMF8	chr1:159795811-159797414
SMAD7	chr18:46358828-46361999
VSTM2L	chr20:36451053-36451554
PRPF40B	chr12:50055168-50059785
INPP4A	chr2:99079762-99082494

NABP1	chr2:192351234-192352778
APCDD1	chr18:10366757-10367258
ADAMTS12	chr5:33789365-33790031
GIMAP6	chr7:150362735-150363825
COL3A1	chr2:189678666-189679167
TPRG1	chr3:188634319-188635529
FASLG	chr1:172606192-172610972
SLC20A1	chr2:113387908-113390104
KIF26B	chr1:245913747-245915905
FGGY	chr1:59395158-59395926
AUTS2	chr7:68741545-68742418
APCDD1	chr18:10304242-10305701
PRG4	chr1:186157655-186158156
DYRK2	chr12:67753128-67753629
LRTM1	chr3:54908909-54910043
PRKACB	chr1:84609279-84610525
EFCAB1	chr8:49319315-49323469
PTPRU	chr1:30180789-30184847
TMC1	chr9:75056470-75058230
TAB2	chr6:149357201-149357702
PALLD	chr4:169552261-169554306
TRPS1	chr8:117435915-117436416
STK38L	chr12:27332343-27332844
CDK6	chr7:92534127-92534628
SEPP1	chr5:42985030-42985531
MEX3B	chr15:82374429-82374930
FABP4	chr8:82411709-82412381
C7orf10	chr7:40337374-40337875
CREG1	chr1:167586598-167587099
TGFB3	chr14:76298257-76298885
EMR1	chr19:6801325-6803162
KCMF1	chr2:85173145-85173915
SOX21	chr13:95920541-95921042
ZNF267	chr16:31880100-31881588
GJB6	chr13:21002770-21003271
GTF3C4	chr9:135523378-135523879
TCF4	chr18:53456541-53458263
JAG1	chr20:11125205-11125706
PTPRC	chr1:198904810-198906714
SLAMF6	chr1:160545538-160546039
EFCAB1	chr8:49318285-49323865
ERG	chr21:40138686-40139187
CREG2	chr2:102012128-102012863
SUPT3H	chr6:45587952-45588453
LAIR1	chr19:54875996-54876756
CAP1	chr1:40524764-40526064
AIG1	chr6:143497136-143497637
TSKU	chr11:76411936-76412437
APCDD1	chr18:10376684-10380132
SIGLEC9	chr19:51625920-51628840
ZFP57	chr6:29676934-29677435
FOXP1	chr3:71544868-71545974
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FOXO1	chr13:40351299-40351800
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IFNE	chr9:21558385-21560043
CA5A	chr16:87928245-87931608
MYO1F	chr19:8634371-8636559
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ZMIZ1	chr10:81082003-81082910
HLA-E	chr6:30476909-30477781
SMOC2	chr6:169434925-169435907
TYR	chr11:89112637-89115967
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TUBD1	chr17:57838144-57840866
IRF6	chr1:209941066-209943913
C5orf20	chr5:134769405-134770284
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SNX13	chr7:17624999-17625500
MZT2A	chr2:132426825-132427790
ZNF705B	chr8:8202300-8205236
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MYO1D	chr17:30878085-30878782
LRR8C	chr1:90222323-90224442
PHOSPHO1	chr17:47294547-47297199
VAPA	chr18:10139931-10140675
JPH2	chr20:42569624-42572221
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CHD7	chr8:61841481-61842166
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MED21	chr12:27332343-27332844
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FABP12	chr8:82411709-82412381
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TTL5	chr14:76298257-76298885
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BARHL1	chr9:135523378-135523879
TXNL1	chr18:53456541-53458263
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CAND1	chr12:67751187-67752167
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CWF19L2	chr11:106913421-106914104
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DAB2	chr5:39755442-39756142
PRPF18	chr10:14049803-14050834
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P2RY8	chrX:1619728-1620229
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FOXQ1	chr6:1285806-1287824
TMCC2	chr1:205267211-205268418
GPIHBP1	chr8:144272207-144273414
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SLC9A9	chr3:142888556-142891052
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FANK1	chr10:127837312-127837813
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N4BP1	chr16:48491610-48493329
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SERTAD2	chr2:65033985-65035232
CTBP1	chr4:1194193-1199050
TMEM26	chr10:63156529-63158398
GULP1	chr2:189757170-189759529
COPS8	chr2:238192615-238193116
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LGMN	chr14:93029280-93030725
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SETD4	chr21:36724851-36726049
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NEK7	chr1:198466677-198467178
FOXQ1	chr6:1145629-1146306
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RGS21	chr1:192513949-192514450
AHR	chr7:17701643-17703028
FABP5	chr8:82139216-82139717
LASP1	chr17:37294389-37296512
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ZSWIM6	chr5:60614726-60616475
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PTTG2	chr4:38372690-38373191
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ASB13	chr10:5627207-5627834
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CDK14	chr7:90676366-90677411
AHR	chr7:17718050-17721657
NHLH2	chr1:116323294-116326069
STEAP1	chr7:89807911-89808412
NREP	chr5:111016712-111018570
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ZNF574	chr19:42615800-42616301
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PCSK1	chr5:95484831-95486878
DIP2A	chr21:47971450-47972810
ZNF705B	chr8:8153373-8154217
PREP	chr6:106034799-106035300
BANP	chr16:88335245-88340362
ADAP2	chr17:29279393-29280168
S1PR3	chr9:91769683-91770184
VAPA	chr18:10239475-10240655
SNX30	chr9:115624543-115625638
METTL8	chr2:172101553-172102054
POSTN	chr13:37881128-37881756
AREL1	chr14:75083007-75088249
ANGPTL2	chr9:129921306-129923613
TMCO5A	chr15:38342400-38343413
POSTN	chr13:38063423-38066451
IGDCC4	chr15:65701259-65701896
PLAU	chr10:75654013-75654514
TM2D3	chr15:102155728-102156229
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CHN1	chr2:175700774-175702491
WNT5A	chr3:55511144-55526179
LTA4H	chr12:96438615-96439116
PRPF18	chr10:14048872-14052755
WNT5A	chr3:55515028-55516034
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TOMM20	chr1:235153771-235155299
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TUBD1	chr17:57826541-57853759
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MZT2A	chr2:132425601-132428239
FZD6	chr8:104357388-104358324
ASB13	chr10:5604965-5609495
PREP	chr6:106040422-106040923
PRPF18	chr10:14051439-14052496
S100Z	chr5:76151662-76152465
CDC5L	chr6:44634461-44635826
CTIF	chr18:46364921-46366009
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MESDC2	chr15:81384732-81385233
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DYM	chr18:46578917-46579418
C1QTNF3	chr5:34051437-34055140
FAM174A	chr5:100113371-100114057
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ATG7	chr3:11571027-11572511
SOX4	chr6:22025533-22027727
TGFBI	chr5:135348090-135348752
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CLDN14	chr21:37801538-37803597
CHIC2	chr4:54553455-54554570
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SLA	chr8:133957426-133959646
THSD4	chr15:71920197-71923963
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PCSK1	chr5:95555631-95556132
F13A1	chr6:6362959-6363460
ADAMTS12	chr5:33650474-33651109
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RBKS	chr2:28310132-28310633
NHLH2	chr1:116322923-116326671
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FZD6	chr8:104359070-104361830
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SNAI2	chr8:49814862-49817402
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PTPRZ1	chr7:121384728-121385369
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PADI1	chr1:17515857-17517367
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CUX1	chr7:101765611-101766112
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VAPA	chr18:10238320-10241369
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VAPA	chr18:10039980-10040990
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GOLGA5	chr14:93252289-93252790
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PSMB1	chr6:170714733-170715415
INHBA	chr7:40854630-40855131
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VWF	chr12:6250856-6251507
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C11orf73	chr11:86226317-86227839
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TFAP2C	chr20:55575121-55575622
TNFRSF19	chr13:24146375-24146876
FGGY	chr1:60217881-60218838
NUAK1	chr12:106313473-106313974
HOXA1	chr7:27032577-27033248
LRRCS5	chr11:56980861-56982154
PTTG2	chr4:38083751-38084419
MTFR2	chr6:136333212-136333713
PPP2R4	chr9:132107877-132108378
LDLRAD4	chr18:13499941-13503050
MR1	chr1:181069125-181071205
PPFIBP1	chr12:27695548-27696049
ADAMTS9	chr3:64325254-64333181
RGS3	chr9:116360783-116361284
SLC6A11	chr3:10973967-10979867
SSR1	chr6:7331459-7333595
VWF	chr12:6254519-6255150
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ADIPOR2	chr12:1921087-1921588
RPS6KC1	chr1:213498848-213499482
CRNN	chr1:152421125-152421883
VWA8	chr13:42184166-42185884
SENP2	chr3:185435031-185436236
DLX1	chr2:172959404-172960250
MYRIP	chr3:40086424-40086925
MSRB3	chr12:66025649-66026830
B4GALNT3	chr12:706954-707455
TMEM92	chr17:48396106-48396878
EDIL3	chr5:83677819-83680881
PDGFC	chr4:157695101-157695756
TSGA10	chr2:99441203-99441890
CAPN8	chr1:223673370-223673871
EDN1	chr6:12354874-12355375
KRT31	chr17:39551277-39551778
LRIG3	chr12:59413757-59414857
PRL	chr6:21664534-21665035
FAM20C	chr7:430806-432275

**Supplementary Table 2-2. BCC-DOWN-H3K27ac**

PALM	chr19:708232-710793
DIO3	chr14:102025515-102026611
STK32A	chr5:146614123-146614782
C1orf87	chr1:61508727-61509483
MICALL2	chr7:1506062-1507057
NTRK2	chr9:87282833-87287560
KIAA1456	chr8:12808716-12810028
TMEM242	chr6:157557065-157558357
SFSWAP	chr12:131531476-131533762
SNX19	chr11:130747932-130748433
NLGN1	chr3:173115182-173116085
C2orf88	chr2:191044786-191046363
ADORA2B	chr17:15689240-15690065
INE1	chrX:47060199-47060700
CNEP1R1	chr16:49872691-49873192
MPP2	chr17:41984314-41984815
EBF4	chr20:2672779-2673280
CLIC6	chr21:36041566-36044059
NTRK2	chr9:87282403-87288187
GALNT16	chr14:69726401-69729556
ACADL	chr2:211089455-211090133
ADORA2B	chr17:15689175-15690371
FAHD2A	chr2:96050796-96051423
KLF15	chr3:126074972-126075985
DIO3	chr14:101999292-102002832
STK32A	chr5:146613374-146615111
MOB2	chr11:1580088-1580589
HRASLS5	chr11:63258417-63258918
SFSWAP	chr12:131753109-131753610
GFRA1	chr10:118030073-118033924
KCNK15	chr20:43374290-43374931
KIAA1456	chr8:12808274-12810745
KCNK7	chr11:65373899-65374400
TMEM55A	chr8:91996841-91998100
CNTFR	chr9:34589094-34590706
FAM150B	chr2:287500-290082
PPARA	chr22:46422501-46423961
COPS8	chr2:237562939-237563440
GPR84	chr12:54772184-54773868
TNFRSF6B	chr20:62323261-62324016
LPCAT1	chr5:1539209-1541447
UAP1	chr1:162517942-162519332
SMOX	chr20:4021682-4022394
MTHFR	chr1:11846815-11852883
CLIC6	chr21:36040841-36044634
C12orf44	chr12:52442584-52452944
ELANE	chr19:847632-849064
GPR84	chr12:54768810-54771452
GNPTG	chr16:1428687-1429726
ALDH3A2	chr17:19482632-19483329
BAG5	chr14:104015399-104019617
C12orf44	chr12:52429240-52431973
ANGPTL2	chr9:129873203-129874722
C12orf44	chr12:52455865-52457011
CKB	chr14:103985731-103989036

NLGN1	chr3:173112820-173113756
SFSWAP	chr12:131529378-131536009
C12orf44	chr12:52448335-52448836
KLHL25	chr15:86315394-86316189
FAM184A	chr6:119399234-119400558
FASTKD3	chr5:7802312-7802813
USP44	chr12:95942143-95942785
GPR153	chr1:6347807-6349048
TMEM242	chr6:157555978-157559161
CDC14B	chr9:99380084-99382622
FAM150B	chr2:286811-290447
DIP2C	chr10:733628-735598
KCNT2	chr1:196577149-196578679
TEX261	chr2:71205525-71206313
TNXB	chr6:32013958-32015421
NUMBL	chr19:41192804-41193482
DNAH9	chr17:11501842-11502343
NRAP	chr10:115406275-115406776
CTGF	chr6:132331969-132332792
ZNRF2	chr7:30173828-30177090
RNF19A	chr8:101524951-101525687
C4orf6	chr4:5206860-5207361
MICALL2	chr7:1505231-1509462
FAM19A5	chr22:48885798-48886299
GFRA1	chr10:118029350-118034722
DIO3	chr14:101997409-102003199
ANKRD1	chr10:92921739-92923944
FAM189A2	chr9:71939175-71940311
CORO2B	chr15:68876944-68877597
SOX10	chr22:38378955-38380851
C11orf44	chr11:130479170-130480391
SLC9A8	chr20:48363745-48365168
ACADL	chr2:211089156-211090713
MAPK4	chr18:48085850-48086351
ACCSL	chr11:43963597-43965719
RBM24	chr6:17280880-17282537
RIPPLY3	chr21:38352773-38353439
ARHGEF16	chr1:3418740-3419241
OR10H5	chr19:15890289-15890790
ZFYVE21	chr14:104189371-104190717
SMAD2	chr18:45554194-45555102
RELN	chr7:103630282-103630783
TSHZ3	chr19:32619263-32619902
EPS15L1	chr19:16507662-16513215
DBI	chr2:120063360-120064727
TAB2	chr6:149210545-149211046
PKNOX2	chr11:125034838-125035497
PHLPP2	chr16:71756732-71758108
DMRTA1	chr9:22447265-22447959
PRRG3	chrX:150863626-150864127
FZR1	chr19:3535995-3538018
C11orf44	chr11:130476305-130477000
TUB	chr11:8039715-8041984
MPV17L	chr16:15489396-15490447
PCGF2	chr17:36897960-36899099
FAM189A2	chr9:71939266-71941455

AGPAT3	chr21:45344960-45345461
GPR153	chr1:6351266-6352674
C1orf87	chr1:61519137-61520656
GPR133	chr12:131404347-131406170
ISX	chr22:34535561-34536062
LTBP4	chr19:41105701-41106337
COPS8	chr2:237795340-237795841
TC2N	chr14:92350380-92352806
INPP5A	chr10:134227374-134227875
TCP11	chr6:35036313-35036814
CNTFR	chr9:34591215-34591927
RNF19A	chr8:101521121-101522614
ANKRD6	chr6:90142822-90143323
TRAPPC10	chr21:45356335-45357419
TSHZ3	chr19:32616501-32617149
GPR153	chr1:6346934-6353066
DAD1	chr14:22806466-22807519
ANGPTL2	chr9:129860781-129861553
PCOLCE2	chr3:142607249-142608617
GMNC	chr3:190580362-190581201
EIF5	chr14:103668487-103668988
PGR	chr11:100997614-100998910
SPAG1	chr8:101170220-101170865
CNTFR	chr9:34592997-34594364
PI16	chr6:36888841-36889342
TSHZ3	chr19:32620610-32621242
STK39	chr2:169048243-169048744
PKN2	chr1:88928424-88928925
NFIA	chr1:61508727-61509483
INTS1	chr7:1506062-1507057
DLC1	chr8:12808716-12810028
ARID1B	chr6:157557065-157558357
GPR133	chr12:131531476-131533762
C11orf44	chr11:130747932-130748433
TBC1D26	chr17:15689240-15690065
ZNF423	chr16:49872691-49873192
RUNX1	chr21:36041566-36044059
ERH	chr14:69726401-69729556
TBC1D26	chr17:15689175-15690371
KCNIP3	chr2:96050796-96051423
ENSG0000026937	chr14:101999292-102002832
DUSP8	chr11:1580088-1580589
GPR133	chr12:131753109-131753610
DLC1	chr8:12808274-12810745
MAP3K11	chr11:65373899-65374400
NECAB1	chr8:91996841-91998100
WNT7B	chr22:46422501-46423961
ACKR3	chr2:237562939-237563440
ZNF385A	chr12:54772184-54773868
MRPL36	chr5:1539209-1541447
UHMK1	chr1:162517942-162519332
RNF24	chr20:4021682-4022394
AGTRAP	chr1:11846815-11852883
RUNX1	chr21:36040841-36044634
NR4A1	chr12:52442584-52452944
ZNF385A	chr12:54768810-54771452

UNKL	chr16:1428687-1429726
SLC47A1	chr17:19482632-19483329
TRMT61A	chr14:104015399-104019617
NR4A1	chr12:52429240-52431973
RALGPS1	chr9:129873203-129874722
NR4A1	chr12:52455865-52457011
MARK3	chr14:103985731-103989036
GPR133	chr12:131529378-131536009
NR4A1	chr12:52448335-52448836
AKAP13	chr15:86315394-86316189
ADCY2	chr5:7802312-7802813
METAP2	chr12:95942143-95942785
ACOT7	chr1:6347807-6349048
ARID1B	chr6:157555978-157559161
ATP6V1B1	chr2:71205525-71206313
LTBP4	chr19:41192804-41193482
HABP2	chr10:115406275-115406776
MOXD1	chr6:132331969-132332792
PLEKHA8	chr7:30173828-30177090
ANKRD46	chr8:101524951-101525687
STK32B	chr4:5206860-5207361
INTS1	chr7:1505231-1509462
ENSG0000026937	chr14:101997409-102003199
PCGF5	chr10:92921739-92923944
ANP32A	chr15:68876944-68877597
ADAMTS15	chr11:130479170-130480391
B4GALT5	chr20:48363745-48365168
ALKBH3	chr11:43963597-43965719
HLC5	chr21:38352773-38353439
MEGF6	chr1:3418740-3419241
OR10H3	chr19:15890289-15890790
PPP1R13B	chr14:104189371-104190717
ZBTB7C	chr18:45554194-45555102
ZNF507	chr19:32619263-32619902
KLF2	chr19:16507662-16513215
STEAP3	chr2:120063360-120064727
UST	chr6:149210545-149211046
MARVELD3	chr16:71756732-71758108
MFSD12	chr19:3535995-3538018
ADAMTS15	chr11:130476305-130477000
EIF3F	chr11:8039715-8041984
ENSG0000026113	chr16:15489396-15490447
CISD3	chr17:36897960-36899099
ACOT7	chr1:6351266-6352674
NFIA	chr1:61519137-61520656
RAN	chr12:131404347-131406170
LARGE	chr22:34535561-34536062
NUMBL	chr19:41105701-41106337
ACKR3	chr2:237795340-237795841
FBLN5	chr14:92350380-92352806
STK32C	chr10:134227374-134227875
ANKS1A	chr6:35036313-35036814
ANKRD46	chr8:101521121-101522614
RRAGD	chr6:90142822-90143323
AGPAT3	chr21:45356335-45357419
ZNF507	chr19:32616501-32617149



ACOT7	chr1:6346934-6353066
OR4E2	chr14:22806466-22807519
RALGPS1	chr9:129860781-129861553
TNFAIP2	chr14:103668487-103668988
TMEM133	chr11:100997614-100998910
C6orf89	chr6:36888841-36889342
ZNF507	chr19:32620610-32621242
B3GALT1	chr2:169048243-169048744

**Supplementary Table 2-3. SCC-UP-H3K27ac**

CHST11	chr12:104871481-104873181
TUBGCP5	chr15:22448341-22449034
PDGFD	chr11:104575424-104576662
SDK1	chr7:3132233-3132734
RIN2	chr20:19537456-19537957
C7orf10	chr7:40346540-40347041
RASA1	chr5:86417337-86417838
STK17B	chr2:197127182-197127994
COMT	chr22:19878420-19880541
RICTOR	chr5:39176978-39177706
NID2	chr14:52641095-52645097
BPGM	chr7:134301645-134311920
CECR5	chr22:17699725-17700226
SPOCD1	chr1:32354799-32355522
GZMA	chr5:54390536-54394082
SNTB1	chr8:121743906-121744568
TGFBR1	chr9:101819307-101822442
TMEM121	chr14:106471359-106471994
LCP2	chr5:169723413-169725687
DCT	chr13:94976055-94976832
LRTM1	chr3:55519129-55522574
FLI1	chr11:128480585-128481620
GPR68	chr14:91694341-91697117
GZMA	chr5:54396774-54401600
COG6	chr13:40351299-40351800
OXNAD1	chr3:16342086-16342587
OR4E2	chr14:22392341-22392842
AMIGO2	chr12:47670022-47671507
SLA	chr8:134151205-134152602
VRK1	chr14:98167745-98177409
FASLG	chr1:172668704-172669205
NONE	chr14:98654900-98656903
ZNF703	chr8:37132080-37135061
IKZF1	chr7:50307013-50308538
COL3A1	chr2:189466055-189466682
VMP1	chr17:57841368-57842237
RASGRP1	chr15:38869767-38870268
IRF2BP2	chr1:234907247-234909773
ICA1	chr7:8216108-8217698
TMPPE	chr3:33089191-33090459
GZMA	chr5:54331679-54334698
SLA	chr8:134164132-134165796
COL24A1	chr1:86673393-86673894
CXCL13	chr4:78506658-78510481
C21orf62	chr21:34303836-34305592
MTAP	chr9:21558385-21560043
SLC7A5	chr16:87928245-87931608
CCM2	chr7:45066503-45068093
TMEM121	chr14:106966240-106968290
STAB2	chr12:103834217-103837671
SKAP1	chr17:46529104-46532858
ZNF414	chr19:8634371-8636559
TRMT10C	chr3:101236265-101241264
CCL5	chr17:34222314-34229132
SUN5	chr20:31559015-31561109

FAM150B	chr2:429126-431260
C1QTNF3	chr5:34498630-34500034
PPIF	chr10:81082003-81082910
PRR3	chr6:30476909-30477781
TMEM75	chr8:129587976-129589453
TRABD2A	chr2:85008136-85011569
HRH4	chr18:22236938-22237595
BICD1	chr12:32079971-32083131
THBS2	chr6:169434925-169435907
SLC2A2	chr3:170968355-170976961
PTGFRN	chr1:117311168-117312092
EMB	chr5:49928808-49932021
NOX4	chr11:89112637-89115967
PLN	chr6:118877499-118881450
CAB39	chr2:231526038-231526900
STAC2	chr17:37492466-37492967
ERMN	chr2:158259438-158263971
VMP1	chr17:57838144-57840866
TRAF3IP3	chr1:209941066-209943913
CCL5	chr17:34202088-34208435
TRIB1	chr8:126936883-126937544
MAP3K8	chr10:30667435-30667936
CCDC126	chr7:23578423-23580267
H2AFY	chr5:134769405-134770284
XCL2	chr1:168503000-168506905
PLCG2	chr16:81501996-81504508
AHR	chr7:17624999-17625500
GPR39	chr2:132426825-132427790
ENSG0000018231	chr8:8202300-8205236
LPCAT1	chr5:1792884-1793557
CDK5R1	chr17:30878085-30878782
MYO1F	chr19:8641191-8642437
RPA3	chr7:7983055-7987003
FCN2	chr9:137712411-137713104
TMEM244	chr6:130179922-130184224
IFNG	chr12:68511732-68512233
SYNCRIP	chr6:86379004-86379654
CD96	chr3:111029201-111031881
MARCH4	chr2:217213440-217219774
ANO10	chr3:43518801-43519302
LRRRC8D	chr1:90222323-90224442
FAM3D	chr3:59436642-59437482
ST8SIA1	chr12:22547298-22553209
SAMHD1	chr20:35669885-35673698
RPLP1	chr15:70007043-70007544
PTGFRN	chr1:117309203-117309704
XCL2	chr1:168389039-168393313
SIRPG	chr20:1634944-1648716
BICD1	chr12:32044158-32044659
ALPK2	chr18:56324336-56326887
TDRD12	chr19:33284069-33287465
ST7	chr7:116645929-116646430
DCT	chr13:94974776-94982877
OR4E2	chr14:22391009-22394377
VRK1	chr14:98067784-98073837
MTG1	chr10:135202578-135203544

LAT	chr16:29039936-29041196
ABI3	chr17:47294547-47297199
NCOA2	chr8:71435414-71437742
SIRPA	chr20:1654472-1656044
CMAS	chr12:22315923-22318340
PTPN9	chr15:75898602-75899324
ETS1	chr11:127920191-127926104
IFNGR1	chr6:137708128-137713512
APCDD1	chr18:10139931-10140675
CMC1	chr3:27921905-27924415
SMCHD1	chr18:2601773-2607785
ANKRD62	chr18:12047213-12053969
ZNF800	chr7:127052965-127056259
TOX2	chr20:42569624-42572221
RAP2B	chr3:152861923-152864061
PMFBP1	chr16:72515753-72516254
PMEPA1	chr20:56425809-56426447
EMB	chr5:49740696-49742706
ELL2	chr5:95561701-95565394
SLC28A3	chr9:86944948-86945449
FAM187B	chr19:35731111-35731986
ENSG0000011759	chr1:99335832-99338130
NONE	chr14:98633428-98645099
CLVS1	chr8:61841481-61842166
UBASH3A	chr21:43823991-43824492
DYRK2	chr12:67875547-67879817
HIF1A	chr14:62127566-62130225
KATNAL1	chr13:30945731-30946479
RICTOR	chr5:39210452-39210953
SNTB1	chr8:121758806-121763531
CCDC126	chr7:23579501-23580002
COG6	chr13:40350062-40350563
NTMT1	chr9:131995958-132000794
MDFIC	chr7:114555658-114559052
TMEM121	chr14:106558483-106561534
PIGC	chr1:172343222-172343919
ZSCAN5A	chr19:56833015-56833516
PKN2	chr1:88225227-88225860
DNAJB6	chr7:157263491-157265940
SLAMF8	chr1:159795811-159797414
MPC1	chr6:166823398-166835284
SKAP1	chr17:46514030-46523305
OLFML2B	chr1:161898353-161900847
DUSP4	chr8:29347574-29348234
ROBO1	chr3:78850257-78852028
KRR1	chr12:76034215-76036420
SMAD7	chr18:46358828-46361999
VSTM2L	chr20:36451053-36451554
GIMAP7	chr7:150199020-150202863
THEMIS	chr6:128270966-128274645
GPR151	chr5:146129911-146134740
ARG1	chr6:131518490-131522758
SIPA1L1	chr14:71407416-71409986
SLITRK1	chr13:84708985-84712785
SDK1	chr7:3102080-3103604
SCML4	chr6:108050798-108063960

BTG4	chr11:111401322-111404002
GRID1	chr10:88170377-88173821
PLEKHF1	chr19:30111690-30116269
VRK1	chr14:98084091-98088064
SAMSN1	chr21:16048245-16048893
LGALS9B	chr17:20202833-20205699
CHRNA1	chr2:175704947-175705573
PRPF40B	chr12:50055168-50059785
EVI2B	chr17:29640259-29640905
CD79A	chr19:42376070-42376783
KCNE2	chr21:35691547-35693150
NR5A2	chr1:200119686-200124971
DISC1	chr1:231746297-231751403
INPP4A	chr2:99079762-99082494
KRBOX4	chrX:45617985-45618486
KRTAP12-4	chr21:46076563-46079939
RNF149	chr2:101977127-101979470
TNFSF11	chr13:42970759-42971260
PEAR1	chr1:156839851-156841778
TMEM121	chr14:106961933-106965521
NABP1	chr2:192351234-192352778
RASA1	chr5:86375698-86378579
CRHR2	chr7:30777094-30779531
C2orf40	chr2:106542610-106547596
IL10	chr1:206929423-206933157
N6AMT1	chr21:30202914-30210545
FAM187B	chr19:35728949-35732975
USP6NL	chr10:11443178-11445797
FAM110C	chr2:175008-178326
RNASEH2B	chr13:51467246-51467747
APCDD1	chr18:10366757-10367258
PKP4	chr2:158750624-158757932
ITGB6	chr2:161085084-161085585
KIAA1217	chr10:24438713-24442149
ADAMTS12	chr5:33789365-33790031
GIMAP6	chr7:150362735-150363825
CMTM8	chr3:32154705-32157147
LRRRC8D	chr1:90184495-90185784
COL3A1	chr2:189678666-189679167
SBK1	chr16:28320033-28324335
ITGAE	chr17:3666276-3671862
SUPT3H	chr6:45769730-45770231
CD3E	chr11:118173022-118193003
GPR12	chr13:27294794-27296848
NMT2	chr10:15246604-15252584
ATP6V1G3	chr1:198578283-198585914
SIRPA	chr20:1664196-1668203
CD70	chr19:6651661-6656359
ST3GAL1	chr8:134626995-134631398
DPPA4	chr3:109523102-109528242
TPRG1	chr3:188634319-188635529
FASLG	chr1:172606192-172610972
SLC20A1	chr2:113387908-113390104
WISP2	chr20:43299712-43301515
GAS7	chr17:10150720-10151221
PRKCQ	chr10:6570013-6573620

SLC22A3	chr6:160880686-160884963
VSTM2L	chr20:36449171-36453215
KIF26B	chr1:245913747-245915905
DNASE1	chr16:3675104-3677959
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GOLGA1	chr9:127725966-127729939
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PCSK5	chr9:77760489-77769313
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PRG4	chr1:186157655-186158156
DYRK2	chr12:67753128-67753629
NEK7	chr1:198159360-198160052
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KCNE2	chr21:35704706-35712949
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GREM1	chr15:33120156-33120657
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TNRC6B	chr22:40294686-40318612
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GORAB	chr1:170414668-170415169
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CYFIP2	chr5:156604703-156627524
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GNAQ	chr9:80815241-80817253
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LHFPL2	chr5:78077133-78080357
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CCR2	chr3:46395443-46396241
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FOXP1	chr3:71544868-71545974
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ST8SIA1	chr12:22382892-22383393
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GPR174	chrX:78350567-78354479
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DOK1	chr2:74801675-74802176
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KIF26B	chr1:245425288-245428471
PTTG1IP	chr21:46298633-46302403
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YWHAH	chr22:32312579-32314626
FMO6P	chr1:171086345-171086846
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SMAD7	chr18:46392966-46396767
DTHD1	chr4:36255828-36259347
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PIGK	chr1:77737107-77738299
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DERL3	chr22:24183333-24183834
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CASD1	chr7:94045143-94053161
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GAS7	chr17:10151770-10152271
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SMAD7	chr18:46364921-46366009
SOX9	chr17:69185655-69186156
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ANXA13	chr8:124844469-124845768
ADAMTS12	chr5:33787664-33788165
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UBE2V2	chr8:49191902-49192403
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GRIK1	chr21:30820912-30823317
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RARRES3	chr11:63318524-63322482
CRYBB1	chr22:27005525-27007284
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DNM3	chr1:172323391-172323892
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SAMD3	chr6:130504279-130506291
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CTBP1	chr4:1194193-1199050
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CEP85L	chr6:119116980-119118230
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DDX6	chr11:118569609-118570110
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MYH13	chr17:10151770-10152271
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BTG1	chr12:91615111-91618423
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DCTN5	chr16:23681795-23682296
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GULP1	chr2:189760358-189766099
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SETD4	chr21:36535776-36536277
SEMA4D	chr9:92098822-92099323
NEK7	chr1:198462017-198471065
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MRC2	chr17:60866965-60870303
POSTN	chr13:38015989-38027891
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LTA4H	chr12:96437667-96443263
IFIH1	chr2:163112487-163112988
AMPH	chr7:38389055-38390574
GULP1	chr2:189489146-189489973
TXNL1	chr18:54231977-54232478
PCSK1	chr5:95555631-95556132
CLIC5	chr6:45622123-45630467
SNX13	chr7:17621452-17622294
F13A1	chr6:6362959-6363460
ADAMTS12	chr5:33650474-33651109
IFNE	chr9:21549041-21564291
ZNF532	chr18:56605469-56605970
GULP1	chr2:189440477-189442752
CEP128	chr14:81235805-81239376
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SLC14A1	chr18:43381716-43382937
ARHGAP28	chr18:6627816-6629143

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KCNC4	chr1:110852010-110852511
C10orf105	chr10:73132203-73132704
OSGEP	chr14:20895956-20896913
FANK1	chr10:127916139-127916640
NAV2	chr11:20118142-20119462
SFT2D1	chr6:166672040-166672541
GPD2	chr2:158102463-158104137
LRRC16A	chr6:25403333-25408720
BMP2	chr20:7674787-7675483
NALCN	chr13:101528283-101528936
AQP9	chr15:58686475-58691075
PHGDH	chr1:120229591-120230092
DNM3	chr1:172246766-172248762
GJA1	chr6:122334481-122334982
CUBN	chr10:16870425-16871294
ADAT2	chr6:143496899-143498170
POSTN	chr13:37960076-37960577
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ACTL7B	chr9:110810602-110811291
SETD4	chr21:36561736-36562615
NHLH2	chr1:116322923-116326671
ST6GALNAC3	chr1:76719409-76719910
EXOSC9	chr4:122705602-122706103
PTPRG	chr3:62051355-62051856
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RFX8	chr2:102011815-102013750
SNX18	chr5:54196549-54197518
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BNC2	chr9:16963848-16964349
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FZD6	chr8:104359070-104361830
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NHLRC1	chr6:17993088-17993589
VAPA	chr18:10373465-10382570
SNX13	chr7:17646859-17649619
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MREG	chr2:216521830-216530931
SOGA2	chr18:8744585-8745335
RBBP8	chr18:20670881-20671382
SOGA2	chr18:8944257-8946138
SLCO5A1	chr8:70544809-70545310
POSTN	chr13:37700898-37703969
GPR1	chr2:207095262-207095969
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BMP4	chr14:53628933-53629434
GJA1	chr6:122115408-122116138
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SOGA2	chr18:8960037-8962493
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M1AP	chr2:74795390-74795891
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FZD2	chr17:42611306-42611969
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TMED7-TICAM2	chr5:114918685-114919889
BAALC	chr8:104197059-104197839
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VAPA	chr18:10297205-10308060
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GJA1	chr6:122336946-122337447
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GGTLC2	chr22:23128916-23136144
NREP	chr5:111280726-111287438
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ADAP2	chr17:29281410-29282254
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ACKR3	chr2:237676303-237679959
DIRAS2	chr9:92445425-92446207
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VWA8	chr13:42187143-42190291
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TBC1D9	chr4:141639848-141640539
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ZNF131	chr5:42983805-42986970
RNF121	chr11:71655546-71656513
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GULP1	chr2:189748006-189749093
GUCY1A3	chr4:156523312-156524710
SOX4	chr6:22236710-22237591
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PLAC1	chrX:133683067-133685735
CAND1	chr12:67774766-67777347
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SETD4	chr21:36721121-36727808
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KIF26B	chr1:246164937-246165438
HOXB1	chr17:46558623-46565762
TG	chr8:134027929-134030278
ADAMTS2	chr5:178803841-178805854
SHROOM3	chr4:77674420-77676497
GULP1	chr2:189438169-189439453
PELI2	chr14:56800026-56801184
DEC1	chr9:118789965-118790610
PDE4B	chr1:66954038-66962433
CBR4	chr4:169542882-169544028
VAPA	chr18:10039980-10040990
PEBP1	chr12:118743976-118746789
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PIK3R5	chr17:8826124-8826625
KCNU1	chr8:37273595-37274096
GUCY1A2	chr11:106268993-106269849

PTGFR	chr1:79026820-79027321
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DACT1	chr14:59281650-59282151
PARP12	chr7:139530373-139530874
OSTF1	chr9:78056152-78057619
DPYS	chr8:105372069-105375062
OXCT1	chr5:41795041-41795542
ROCK1	chr18:18743105-18744274
FILIP1L	chr3:99427570-99428384
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DOCK2	chr5:169230418-169231176
TBATA	chr10:72452707-72456116
RGS6	chr14:73109305-73111027
DOCK10	chr2:225746389-225747066
CARD18	chr11:105050950-105054706
TENM2	chr5:167125658-167126472
ZNF354C	chr5:178733446-178734466
DUSP16	chr12:12540285-12540786
MALT1	chr18:56467242-56468960
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MDGA1	chr6:37682060-37682561
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KAT6B	chr10:76802253-76802754
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ZNF281	chr1:200148782-200149435
TIAM2	chr6:155253072-155255197
NEK7	chr1:198463358-198464315
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INHBA	chr7:40854630-40855131
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RAP2B	chr3:153330667-153334051
ADTRP	chr6:11609111-11609753
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PIEZO2	chr18:11246243-11246931
CNGA3	chr2:98950194-98950956
CXorf36	chrX:45337840-45339157
CADPS	chr3:62571178-62574416
EIF5	chr14:103827566-103829194
MARCH10	chr17:60901884-60902385
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SOST	chr17:41811231-41811732
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TCF4	chr18:52806274-52807379
IRAK3	chr12:66661211-66663961
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SNAI2	chr8:49814457-49818157
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PLCH1	chr3:154959073-154959574
OLIG3	chr6:137959646-137960147
THSD4	chr15:71919038-71929263
CD163	chr12:7651931-7652704
LMCD1	chr3:8663815-8664640
IL1R2	chr2:102715395-102718897
C11orf73	chr11:86226317-86227839
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ADAM10	chr15:58809495-58810227
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MYH3	chr17:10459523-10460316
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CFL2	chr14:35119020-35120077
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TNFRSF11B	chr8:119269320-119269821
SRSF7	chr2:38923614-38924115
FABP12	chr8:82408410-82414323
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ADAMTS12	chr5:33649033-33651641
GNA12	chr7:2748476-2751528
GRB10	chr7:50677913-50678414
ZCCHC4	chr4:25332446-25333927
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DUSP16	chr12:12532307-12533211
PPP2R4	chr9:131999701-132000202
ZNF831	chr20:57740572-57741208
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SBF1	chr22:50799519-50800218
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TMEM211	chr22:25461665-25469259
TRAF1	chr9:123654329-123654830
CD27	chr12:6551875-6558495
ALDH1L2	chr12:105431097-105431787
DBH	chr9:136563738-136569315
CD2	chr1:117352773-117353814
FAM84B	chr8:126660265-126661488
P2RY8	chrX:1585235-1591846
NARS2	chr11:78174949-78178247
MYO1G	chr7:44931253-44931931
PPP2R5C	chr14:102285292-102285793
EOMES	chr3:27680363-27682052
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SARDH	chr9:136542882-136543743
OR4E2	chr14:22988957-22991169
ADRB1	chr10:115719515-115721019
RHOH	chr4:40300256-40314920
CASP10	chr2:202116804-202117305
CDHR3	chr7:105445016-105451645
DMRTB1	chr1:53873161-53882368
KLF6	chr10:3798399-3798900
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LYRM7	chr5:130589875-130590376
TIAM1	chr21:32556469-32556970
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CDYL2	chr16:80690240-80690741
EEF1A1	chr6:74180645-74181146
OR4E2	chr14:22992853-22993354
DBH	chr9:136566201-136568675
DPH5	chr1:101414591-101417104
AKAP7	chr6:131601702-131604222
GRAMD4	chr22:47009079-47009747
ANKRD46	chr8:101506083-101507823
SPP2	chr2:235397333-235399252
MAN1A1	chr6:119635111-119636053
SARDH	chr9:136540408-136544499
RHOH	chr4:40244627-40245128
OR4E2	chr14:23000536-23002649
ESR1	chr6:152502544-152509757
ZNF831	chr20:57738269-57739512
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OR4E2	chr14:22994167-22994668
CCDC88C	chr14:91868623-91869580
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LTBR	chr12:6532643-6538261
SLAMF6	chr1:160396593-160403694
VPS45	chr1:150077080-150085546
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SLAMF6	chr1:160398669-160400247
COTL1	chr16:84580983-84589583
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RHOH	chr4:40190281-40236501
LSM14A	chr19:34840730-34841231
TNRC6B	chr22:40720101-40720802
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B4GALT5	chr20:48286296-48286797
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C2CD5	chr12:22558935-22571599
TRAF6	chr11:36443096-36443722
MCTP1	chr5:94127733-94131451
TRERF1	chr6:42353871-42363833
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RTN4IP1	chr6:106970350-106970851
MAP2K2	chr19:4108186-4110586
GTF3C1	chr16:27416994-27417653
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ZNF438	chr10:30991593-30992094
ZNF80	chr3:113930069-113946920
ABCC6	chr16:16054652-16055758
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RHOH	chr4:40302186-40303377
OSBPL7	chr17:45808380-45815157
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CSGALNACT1	chr8:19483727-19484228
GRAP2	chr22:40299270-40299771
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FAM192A	chr16:57038362-57038863
SLAMF1	chr1:160605661-160618700
SLC35G3	chr17:33487097-33490110
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PRDM2	chr1:14059437-14060884
GPR114	chr16:57633161-57638132
MPRIP	chr17:17083446-17083947
C1QTNF6	chr22:37562925-37564462
SPAG6	chr10:22943544-22944045
DLEU1	chr13:50996471-50997129
PAG1	chr8:82009131-82009632
RASGRP1	chr15:38964261-38964762
PSMA1	chr11:14598605-14602616
CLECL1	chr12:9814544-9832825
RAP1A	chr1:112140417-112140918
HIVEP1	chr6:12051910-12053364
ATP5O	chr21:35308394-35309952
C1QTNF6	chr22:37565062-37565563
CXCR6	chr3:46015723-46016224
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APOL1	chr22:36771965-36773098
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SNCA	chr4:90216544-90217045
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EIF4E3	chr3:71542107-71542608
MDGA1	chr6:37480289-37487227
KANSL1	chr17:44095444-44099584
CD6	chr11:60842562-60851807
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UBE2E3	chr2:181989309-181989810
LIG3	chr17:33371134-33382038
C2CD5	chr12:22560578-22565481
P2RY10	chrX:78361984-78365900
LGMN	chr14:93034968-93035469
MSI2	chr17:55678822-55679323
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PRKAG2	chr7:151465483-151466312
JDP2	chr14:75980577-75982199
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ZC3H8	chr2:112912712-112913365
YWHAQ	chr2:9821393-9821894
OR4E2	chr14:23010271-23010772
ELOVL5	chr6:53196661-53204092
TMEM66	chr8:29353764-29358817
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TPST2	chr22:26974954-26976094
PPARD	chr6:35315991-35316492
OR4E2	chr14:22941652-23040684
HTT	chr4:3204336-3204837
PRDM8	chr4:81091194-81096210
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LANCL2	chr7:55603327-55603828
CD28	chr2:204718786-204719287
IKZF3	chr17:38016530-38024959
CLMP	chr11:122940932-122941433
NARS2	chr11:78176049-78176550
TMEM66	chr8:29846506-29854854
SOBP	chr6:108139540-108146695
GPR114	chr16:57634252-57635560
OR4E2	chr14:23013104-23013864
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SARDH	chr9:136545235-136551671
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LANCL2	chr7:55600132-55602789
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FIGNL1	chr7:50351130-50352696
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DRAP1	chr11:65693529-65697384

DOCK3	chr3:51061236-51064451
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SPAG6	chr10:22938602-22939103
CAND1	chr12:67876768-67877690
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SPP2	chr2:235196873-235205951
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CHRM3	chr1:239882577-239883078
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DOCK8	chr9:444782-449138
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GPX2	chr14:65394992-65395493
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ZSCAN10	chr16:3123625-3127344

PRKCH	chr14:62125660-62131456
APOD	chr3:195277943-195279075
DEC1	chr9:118089948-118090929
KATNAL1	chr13:30721843-30722344
PTP4A2	chr1:32354132-32356431
POLR2E	chr19:1066984-1069594
GNS	chr12:65062479-65065615
BCL2A1	chr15:80260773-80261274
ZEB1	chr10:31549911-31551624
H3F3C	chr12:32049950-32051066
CYTIP	chr2:158260402-158260903
PLAU	chr10:75652751-75653252
GRK5	chr10:121274499-121280048
SNAP47	chr1:227952684-227954863
TNFSF4	chr1:173174287-173174788
SMAP2	chr1:40849047-40854096
BTG1	chr12:91642427-91643273
SLC14A2	chr18:43267038-43267539
FYB	chr5:39201777-39202851
LUM	chr12:91501297-91506012
CD48	chr1:160673198-160684227
GRK5	chr10:121261927-121262983
TNFSF8	chr9:117690791-117691438
KHDRBS3	chr8:136220380-136222406
BTG1	chr12:91709164-91712418
ESD	chr13:46870407-46871476
XRCC6BP1	chr12:58924108-58925936
POLR1A	chr2:86221332-86221833
FOXO1	chr13:40526807-40527308
HECW2	chr2:197104119-197106571
GLCC1	chr7:8171487-8172527
ITPR1	chr3:4560807-4561555
RXRA	chr9:137388497-137389354
COL6A3	chr2:238340953-238345425
GRIN2B	chr12:13500519-13501167
LY9	chr1:160807559-160808214
OLFM2	chr19:9968456-9968957
WIPI1	chr17:66342475-66342976
KERA	chr12:91433164-91433665
UBE3C	chr7:157094270-157095964
HIC1	chr17:2162928-2163429
ECHDC2	chr1:53102274-53102908
MYO1D	chr17:30829829-30832833
GALM	chr2:38881488-38881989
UMODL1	chr21:43536976-43537477
ZBTB46	chr20:62381934-62383078
ZMIZ1	chr10:81076835-81078171
STK10	chr5:171601495-171603247
ZEB1	chr10:32034113-32035228
FOXQ1	chr6:1113615-1117208
TSHZ3	chr19:31868683-31869419
COG6	chr13:41060348-41060849
ZNF365	chr10:64393655-64401355
BMP10	chr2:69001312-69002917
CBL	chr11:119133841-119134342
TOX	chr8:59713297-59713978

KCNH5	chr14:62605118-62606702
IRF6	chr1:209938298-209949596
GRIA2	chr4:159041323-159042433
DCHS2	chr4:154965437-154966636
THEM4	chr1:151870409-151871339
RBL1	chr20:35597672-35598173
TRERF1	chr6:42334521-42336009
COL1A2	chr7:94033188-94035021
MVB12B	chr9:129278354-129280561
FARS2	chr6:5831501-5832405
EDAR	chr2:109647820-109649354
SNAI3	chr16:88748158-88749060
HMGB1	chr13:30950222-30950883
GAK	chr4:872653-873154
COG6	chr13:40962540-40963041
COA1	chr7:43698383-43699581
MYO1B	chr2:192066270-192068066
SETD4	chr21:36930408-36938875
BANP	chr16:88330652-88334320
EPHB3	chr3:184503053-184505137
SNX13	chr7:17569315-17576451
PPP2R4	chr9:132032947-132034209
ZNF705B	chr8:8190090-8192783
FTCDNL1	chr2:200674847-200675681
C18orf25	chr18:43829573-43831219
AMICA1	chr11:118076689-118077999
WDR1	chr4:10034662-10035477
DEF6	chr6:35278323-35280214
STK10	chr5:171539751-171540252
RPGRIP1L	chr16:53551465-53553732
KLHL6	chr3:183269676-183274583
SLC25A15	chr13:41578570-41579071
H3F3C	chr12:31985341-31986234
GIMAP7	chr7:150208548-150218722
FOXO3	chr6:109223413-109224098
FAM84B	chr8:126942546-126943847
PIEZO1	chr16:88856370-88857757
M1AP	chr2:74793231-74807042
SAG	chr2:234239865-234240366
GRM5	chr11:88147689-88149288
NR5A2	chr1:200319922-200324451
HHIPL2	chr1:222167550-222168493
COL1A2	chr7:94053938-94055975
FAM192A	chr16:57073097-57077189
MAPK10	chr4:86622506-86623007
HECW2	chr2:197047568-197048069
UBE2E2	chr3:23817506-23819621
DNM3	chr1:172376929-172378090
SLC1A3	chr5:36724881-36725382
ZNF365	chr10:64144312-64144813
COL1A2	chr7:94029484-94032561
SP100	chr2:231521254-231534881
FAM109A	chr12:111494753-111495604
FBXO32	chr8:124489270-124489771
ADAMTS20	chr12:43150066-43151845
TPGS2	chr18:33888263-33891279

NCOA7	chr6:126123668-126124456
GIMAP2	chr7:150371785-150377138
RDM1	chr17:34216999-34217648
CASP12	chr11:104574119-104580050
CBR4	chr4:169471353-169472056
POSTN	chr13:37747922-37751456
RPAP3	chr12:47668883-47673182
SHROOM3	chr4:77702638-77705501
DNAJC5B	chr8:66893630-66894131
SMAP2	chr1:40861982-40862483
PITPNC1	chr17:65430636-65431137
OPN4	chr10:88403096-88403740
GRIA2	chr4:158940902-158942920
VPS13B	chr8:100511161-100511861
GIMAP2	chr7:150372122-150376428
COL5A1	chr9:137700888-137704564
NRP1	chr10:33595101-33595602
PRKCQ	chr10:6342085-6342973
RNF125	chr18:29620393-29620894
NUAK1	chr12:106451944-106452657
FGGY	chr1:60162694-60163636
CORO1A	chr16:30194226-30199186
STK17A	chr7:43684492-43691849
APOLD1	chr12:12959588-12962558
RPS6KA2	chr6:166900491-166903707
UST	chr6:149350624-149359402
HMBOX1	chr8:29106953-29108464
NUP93	chr16:56881996-56885191
BMP7	chr20:55449599-55451599
RXRA	chr9:137383598-137384099
LPA	chr6:160883838-160884339
CMTM7	chr3:32501009-32502458
PQLC2	chr1:19802614-19804555
GJA1	chr6:121870009-121870510
TNFRSF13B	chr17:16891331-16892380
VAV1	chr19:6798663-6804470
AKR1C4	chr10:5335533-5336613
TNFSF11	chr13:43565058-43567211
NRP1	chr10:33402491-33403612
DNM3	chr1:172349811-172350469
CLUAP1	chr16:3626203-3629103
RBM43	chr2:151465503-151466460
CD84	chr1:160546790-160548253
POSTN	chr13:38114749-38115916
CLDN23	chr8:8654930-8655431
FRMD4A	chr10:13755110-13755611
TNFRSF10A	chr8:23075553-23078628
FANCA	chr16:89830658-89831369
BANP	chr16:88219671-88222259
CRYBA4	chr22:27620065-27620566
SLFN14	chr17:33866635-33868835
FXYD5	chr19:35702353-35705543
CTSD	chr11:1778768-1780411
SH3YL1	chr2:176162-176663
PHLDA1	chr12:76337548-76339065
ATP1A1	chr1:117045742-117047782

BTG1	chr12:91718542-91723221
DTNA	chr18:32609792-32610293
DNM3	chr1:172309984-172314586
DYNLT1	chr6:159070544-159071045
FAM210A	chr18:13463779-13465718
MYO1B	chr2:192348908-192355440
CSF1R	chr5:149446031-149446841
BTG1	chr12:92428118-92429798
COMMD7	chr20:31125183-31128478
CDC14A	chr1:100866352-100866853
FOXO3	chr6:109216649-109217299
EYA3	chr1:28318780-28319420
SETD4	chr21:36874963-36878687
HIVEP3	chr1:42268497-42269714
GRK5	chr10:121275239-121279381
GAS1	chr9:89019371-89024667
KCNAB1	chr3:156200711-156202664
GULP1	chr2:189585883-189586576
JUN	chr1:59407900-59408799
TRIO	chr5:14593606-14595485
IL16	chr15:81587509-81592244
DEDD2	chr19:42702944-42707084
WISP3	chr6:112349470-112349971
IL10RA	chr11:117873107-117874886
CASP3	chr4:185434616-185436596
SSH2	chr17:28032471-28034410
DYRK2	chr12:68375326-68375827
CARD11	chr7:2913498-2914137
TVP23A	chr16:10847178-10847880
KLF6	chr10:4011915-4012416
ZNF689	chr16:30613307-30613808
TMEM45A	chr3:100289211-100289712
DBX1	chr11:19744960-19745987
VRK2	chr2:58334724-58335854
LAMA2	chr6:129992864-129995422
CD97	chr19:14466506-14467172
CLIC6	chr21:36360210-36360711
TLR8	chrX:12972766-12976504
FUT8	chr14:65800530-65802403
ANKEF1	chr20:9969186-9970654
LASP1	chr17:37288734-37291858
GPR18	chr13:99880717-99881968
CD84	chr1:160537286-160538825
DOCK10	chr2:225811124-225812366
TTLL5	chr14:76287831-76290529
CHN1	chr2:175710228-175710875
NANS	chr9:100864943-100865444
ZNF114	chr19:48760896-48761942
GLRX5	chr14:95989640-95991004
COX7C	chr5:86414044-86419655
PRKCH	chr14:61804254-61804755
CD180	chr5:66517833-66518334
ABI3	chr17:47286804-47289162
PLIN3	chr19:4914846-4916971
HKDC1	chr10:70981574-70982908
TMCC2	chr1:205256535-205257464

TOMM20	chr1:234910864-234911529
LST1	chr6:31552912-31556802
RTN4IP1	chr6:106966700-106968889
PPCDC	chr15:75422849-75423350
UMODL1	chr21:43481807-43483394
COL6A3	chr2:238349311-238350898
FER1L6	chr8:124850068-124853438
SMAP2	chr1:40858079-40858719
CLIC6	chr21:36398534-36400985
NRP1	chr10:33410981-33411769
FPR2	chr19:52292857-52293358
CARD11	chr7:3134221-3135409
WDR75	chr2:190275839-190278323
OLIG3	chr6:137957865-137958366
ALOX5AP	chr13:31313686-31315287
FCGBP	chr19:40447016-40447783
NCOA7	chr6:126120050-126120849
STXBP6	chr14:25143255-25143944
LHX2	chr9:126978560-126981534
ITGB2	chr21:46339171-46341609
TMX1	chr14:52042207-52043204
MID1IP1	chrX:39631273-39631774
XRCC6BP1	chr12:58922206-58923568
CEACAM21	chr19:42054876-42056844
ANKRD11	chr16:89381457-89384884
ITPRIPL1	chr2:96981003-96982367
ARHGEF3	chr3:56815666-56821605
LPP	chr3:188849388-188851197
KLF6	chr10:4015074-4016110
ZFP64	chr20:51109214-51110243
KLF13	chr15:31555089-31558521
RPS6KA5	chr14:91143716-91144513
PRDM1	chr6:106348327-106349228
ATP1B1	chr1:169013128-169013629
DDHD1	chr14:53574756-53575619
ME3	chr11:86431107-86431608
ATF6	chr1:161921867-161924093
UACA	chr15:70550812-70551596
RAB27B	chr18:53166790-53169318
FOXI1	chr5:169703621-169707635
EFCAB11	chr14:90147733-90148234
PRKCQ	chr10:6389510-6390805
NTSR1	chr20:61369986-61374299
GULP1	chr2:189391069-189393531
CD274	chr9:5493891-5494392
ELFN2	chr22:37702758-37705707
FOXO1	chr13:40683335-40684448
GADD45G	chr9:92137281-92138880
AFF3	chr2:100386373-100386874
RAB37	chr17:72733141-72735676
MOB1B	chr4:71813098-71813599
LASP1	chr17:37236440-37239918
ELL2	chr5:95206033-95206534
CLIC6	chr21:36354854-36356333
BANP	chr16:88331619-88333206
TBC1D29	chr17:29135523-29137058

SIK3	chr11:116722133-116725465
SLC41A2	chr12:104856743-104857413
ARHGGEF10	chr8:1969121-1969622
NUP214	chr9:134112734-134114005
MAML2	chr11:95947612-95951258
PHB2	chr12:7059736-7063759
DIRAS2	chr9:92769617-92770426
DNM3	chr1:172236426-172237231
SEL1L	chr14:81930851-81931352
LASP1	chr17:37248551-37249548
LASP1	chr17:37250516-37253763
CCR3	chr3:46339555-46340209
GSTZ1	chr14:77769373-77770197
NR5A2	chr1:200321003-200323517
CHST15	chr10:125823632-125825208
METTL9	chr16:21656379-21656880
DNMT1	chr19:10237239-10237969
ZBTB18	chr1:244482352-244483977
NID1	chr1:236161734-236163578
GIMAP5	chr7:150452170-150453930
TMEM26	chr10:63156164-63159239
QPCT	chr2:37851038-37853990
SETD4	chr21:36847647-36849059
PRKCE	chr2:46264346-46264984
ZNF407	chr18:72781577-72783598
CLCN1	chr7:143070590-143073436
RAB14	chr9:123884120-123884621
TVP23A	chr16:10842292-10842793
DOCK8	chr9:447906-448666
NT5M	chr17:17306684-17308048
FOXI1	chr5:169702342-169702843
JUN	chr1:59483864-59487309
C6orf62	chr6:24741103-24746497
VAPA	chr18:10101836-10102337
UBASH3B	chr11:122598129-122598630
FOSL2	chr2:28446118-28448778
TSGA10	chr2:99374024-99377468
KCNJ1	chr11:128597228-128599203
RGS10	chr10:121065088-121066468
OLIG3	chr6:137557787-137563597
GIMAP6	chr7:150263965-150267361
GALNT10	chr5:153600269-153601875
NUP214	chr9:134127550-134132517
CARD8	chr19:48752097-48754091
VWA8	chr13:42036993-42040214
ZNF532	chr18:56603899-56604400
CXCR4	chr2:136995738-136997876
KCNJ1	chr11:128594963-128596677
TUBD1	chr17:57829297-57836958
TAGAP	chr6:159460030-159460531
TMX3	chr18:66095722-66096223
EFCAB11	chr14:90186457-90187214
MUCL1	chr12:55329366-55330071
ESR1	chr6:152621232-152624712
TVP23A	chr16:10843422-10844482
CCDC88C	chr14:91839146-91839776



MAPKAPK2	chr1:206943174-206944645
DSG1	chr18:28827388-28828595
PTCD2	chr5:71768208-71768709
CADPS	chr3:62587544-62591509
CDK17	chr12:96893893-96896976
PMEPA1	chr20:56201855-56205528
SLC1A4	chr2:65144854-65145355
CLIC5	chr6:45404087-45405766
ANXA3	chr4:79582429-79584566
SYF2	chr1:25348473-25350761
CLDN24	chr4:184270084-184270967
MICAL2	chr11:12197519-12198020
ANXA3	chr4:79575584-79581698
FAM105B	chr5:14810152-14811186
AMPH	chr7:38397943-38398838
JPH2	chr20:42569312-42573204
BCAS1	chr20:52258467-52260792
HEMK1	chr3:50627666-50629157
GIMAP8	chr7:150178290-150182989
MGST2	chr4:140578301-140580270
TRIM62	chr1:33564360-33566423
GAPVD1	chr9:128411965-128414231
ATRN	chr20:3400661-3401398
DNM3	chr1:172363257-172364981
USP20	chr9:132707073-132708980
LAMA2	chr6:130008264-130008765
GIMAP7	chr7:150210775-150215789
ZNF705B	chr8:8200372-8206726
CD83	chr6:14275982-14278316
MFNG	chr22:37879739-37882927
SLA	chr8:134085147-134089582
RAP2B	chr3:152938773-152940704
RMI1	chr9:86911454-86911955
UTS2R	chr17:80356721-80358712
HLA-A	chr6:29932142-29934362
CBR4	chr4:169550399-169560534
PIK3CG	chr7:106357806-106359961
UMODL1	chr21:43607238-43608758
UST	chr6:149352499-149354659
GALNT6	chr12:51787432-51788609
SLAMF7	chr1:160737529-160738338
XBP1	chr22:29206942-29207724
DNM3	chr1:172326748-172330768
RPS6KA2	chr6:166901204-166902596
RFTN1	chr3:16353204-16354304
LRR37A3	chr17:62704380-62705539
SP100	chr2:231523476-231525458
ARID1A	chr1:27070030-27071647
SLC22A5	chr5:131801662-131803042
BRD7	chr16:50314614-50316189
SERPINB9	chr6:2857239-2859407
NTSR1	chr20:61370631-61373226
PMEPA1	chr20:56202272-56204589
TMCC2	chr1:205252951-205255498
C6orf62	chr6:24742423-24744319
RAD51B	chr14:69245506-69249867

JUN  
ESR1

chr1:59485073-59486675  
chr6:152622518-152623786

**Supplementary Table 2-4. SCC-DOWN-H3K27ac**

PALM	chr19:708232-710793
DIO3	chr14:102025515-102026611
ZSCAN18	chr19:58609118-58610487
STK32A	chr5:146614123-146614782
C1orf87	chr1:61508727-61509483
MICALL2	chr7:1506062-1507057
ATF3	chr1:212780243-212783293
PALM	chr19:707261-711910
C1orf87	chr1:61515633-61517522
SLC25A21	chr14:37641219-37641987
NTRK2	chr9:87282833-87287560
KIAA1456	chr8:12808716-12810028
TMEM242	chr6:157557065-157558357
SFSWAP	chr12:131531476-131533762
SNX19	chr11:130747932-130748433
ZSCAN18	chr19:58608078-58610893
NLGN1	chr3:173115182-173116085
C2orf88	chr2:191044786-191046363
ADORA2B	chr17:15689240-15690065
INE1	chrX:47060199-47060700
CNEP1R1	chr16:49872691-49873192
MPP2	chr17:41984314-41984815
EBF4	chr20:2672779-2673280
CLIC6	chr21:36041566-36044059
AK4	chr1:65612861-65614983
NTRK2	chr9:87282403-87288187
GALNT16	chr14:69726401-69729556
ACADL	chr2:211089455-211090133
HSPA12A	chr10:118501615-118502844
ADORA2B	chr17:15689175-15690371
A4GALT	chr22:43114858-43117405
ATF3	chr1:212777596-212783981
VWA2	chr10:115999168-115999669
FAHD2A	chr2:96050796-96051423
TSPAN2	chr1:115825638-115826139
KLF15	chr3:126074972-126075985
RFX2	chr19:6108140-6111260
DIO3	chr14:101999292-102002832
STK32A	chr5:146613374-146615111
SLC25A21	chr14:37640830-37642333
MOB2	chr11:1580088-1580589
CACNB4	chr2:152954021-152955909
NAA35	chr9:88419752-88421086
FOS	chr14:75742267-75746707
HRASLS5	chr11:63258417-63258918
MET	chr7:116311745-116312930
ARHGEF26	chr3:153838744-153840651
SFSWAP	chr12:131753109-131753610
GFRA1	chr10:118030073-118033924
KCNK15	chr20:43374290-43374931
KIAA1456	chr8:12808274-12810745
KCNK7	chr11:65373899-65374400
MYOM2	chr8:1921986-1922907
TMEM55A	chr8:91996841-91998100
CNTFR	chr9:34589094-34590706

FAM150B	chr2:287500-290082
PPARA	chr22:46422501-46423961
COBL	chr7:51383596-51385111
EVA1C	chr21:33782794-33786708
DOC2B	chr17:29345-31109
PLEKHA1	chr10:123871601-123874849
COPS8	chr2:237562939-237563440
GPR84	chr12:54772184-54773868
RNF180	chr5:63461508-63462299
TNFRSF6B	chr20:62323261-62324016
LPCAT1	chr5:1539209-1541447
UAP1	chr1:162517942-162519332
FOSB	chr19:45970433-45973963
SMOX	chr20:4021682-4022394
CCND1	chr11:69191168-69191669
PM20D2	chr6:89855280-89857171
SAMD4B	chr19:39833327-39834715
EVA1C	chr21:33781776-33788316
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BOK	chr2:242503649-242504150
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CNTFR	chr9:34588858-34595043
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COBL	chr7:51381641-51385971
TLE3	chr15:70381112-70381613
COPS8	chr2:237795340-237795841
GPRC5A	chr12:13043725-13045387
PHF19	chr9:123656388-123657506
MTMR7	chr8:17354477-17356857
MEGF6	chr1:3454836-3457474
NTHL1	chr16:2171265-2173482
TC2N	chr14:92350380-92352806

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B4GALT6	chr18:29303331-29305041
TNRC6C	chr17:75859128-75863055
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TNP1	chr2:217850623-217851907
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FGF14	chr13:103051808-103053452
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OPTC	chr1:203447972-203448655
FAM20C	chr7:228178-232590
E2F8	chr11:19585619-19586705
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PTPRS	chr19:5308471-5309385
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CPEB1	chr15:83315921-83316981
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MPRIP	chr17:16961583-16962084
NDRG1	chr8:134501120-134501788
GPR153	chr1:6346934-6353066
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FAM19A5	chr22:48884450-48888653

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SHC2	chr19:459331-462710
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CPN2	chr3:194014408-194015380
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PLLP	chr16:57316997-57319163
GPR37L1	chr1:202098327-202104669
NACAD	chr7:45127318-45129453
PRIMA1	chr14:94254423-94256403
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TNXB	chr6:32046660-32057508
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MTHFR	chr1:11854536-11855037
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C1orf191	chr1:54755730-54756744
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ACTL8	chr1:17901456-17902914
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CORO2B	chr15:68881731-68882695
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CARM1	chr19:11009181-11010486
FAM20C	chr7:225883-232568
MAMDC2	chr9:72658517-72659809
BOC	chr3:112947239-112948098
RASGRP1	chr15:39764508-39766224
SEC61A1	chr3:127795786-127796643
RCC2	chr1:17857774-17860415
VIPR2	chr7:158861515-158862016
HTRA3	chr4:8248921-8249837
LARGE	chr22:34315404-34316548
TMEM61	chr1:55446218-55446884
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ERVFRD-1	chr6:11216167-11216668
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RHPN2	chr19:33555347-33555848
FOXD2	chr1:48175338-48175839
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IL17D	chr13:21283324-21284704
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ZNF708	chr19:21504574-21505936
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PCOLCE2	chr3:142607249-142608617
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CELF4	chr18:35157191-35158361
STXBP6	chr14:25517654-25519761
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KDM4B	chr19:5127573-5129265
OR1D5	chr17:2898744-2900476
GOLGA8B	chr15:35014229-35015107
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FBLN2	chr3:13635808-13636309
HENMT1	chr1:109137859-109138360
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SLC16A3	chr17:80109777-80111624
ARHGAP39	chr8:145925041-145926269
KANK4	chr1:62534177-62534678
NKAIN3	chr8:63160421-63162618
RPS6KL1	chr14:75389062-75390243
RXRA	chr9:137174403-137175304
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MOB2	chr11:1568027-1568528

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INTS1	chr7:1506062-1507057
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GPR133	chr12:131531476-131533762
C11orf44	chr11:130747932-130748433
ZNF135	chr19:58608078-58610893
TBC1D26	chr17:15689240-15690065
ZNF423	chr16:49872691-49873192
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MARVELD1	chr10:99477337-99478405
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LGI2	chr4:24913208-24915188
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BAG5	chr14:104005072-104005573
ZNF423	chr16:49862462-49863099
GPX4	chr19:1143546-1158955
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BCAP31	chrX:152965678-152966179
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**Supplementary Table 2-5. BCC-UP-mRNA**

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11-Mar

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3-Sep

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**Supplementary Table 2-6. BCC-DOWN-mRNA**

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**Supplementary Table 2-7. SCC-UP-mRNA**

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GTSE1  
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HAS3  
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STRIP2  
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TOR4A  
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UNC5B  
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VRK2  
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**Supplementary Table 2-8. SCC-DOWN-mRNA**

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MAP3K8  
MAP6

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MAPK8IP1  
MAPT

2-Mar

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MEOX2  
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MFAP4  
MFSD4A  
MGAT3  
MGP  
MICU3  
MIR99AHG  
MISP3  
MITF  
MLPH  
MLXIPL  
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MOGAT2  
MPC1  
MPDZ  
MPPED1  
MPPED2  
MPZ  
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MT-CO3  
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MT-RNR2  
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MT1M

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NTN4  
NTRK2  
NTRK3  
NUPR1  
NXPH3  
NYNRIN  
OBSL1  
OCA2  
ODF3L1  
OGN  
OLFM2  
OLFML3  
OMD  
OPHN1  
OSER1-AS1  
OSR1  
OSR2  
OVGP1  
OXER1  
OXGR1  
P3H3  
P4HTM  
PADI2  
PALM  
PALMD  
PAMR1  
PARD3B  
PARK2  
PARM1  
PAX3



PCAT19  
PCCA  
PCDH19  
PCDHB4  
PCK1  
PCOLCE  
PCP4  
PCSK2  
PDCD4  
PDE1A  
PDE1B  
PDE2A  
PDE4B  
PDE4D  
PDE9A  
PDGFD  
PDGFRL  
PDK4  
PDLIM2  
PDLIM3  
PDLIM4  
PDZD4  
PDZRN3  
PDZRN4  
PEBP1  
PEBP4  
PECR  
PEG10  
PELI2  
PEMT  
PER1  
PER2  
PGM5  
PGR  
PHF1  
PHGDH  
PHKG1  
PHLPP1  
PHYH  
PHYHD1  
PHYHIP  
PI16  
PID1  
PIFO  
PIGR  
PIK3R1  
PIM3  
PIP  
PIP5K1B  
PKD1  
PKDCC  
PKN1  
PKNOX2  
PLA2G16  
PLA2G2A  
PLA2G4C

PLA2G6  
PLAC9  
PLCB4  
PLCE1  
PLCXD3  
PLEKHB1  
PLEKHH2  
PLIN1  
PLIN2  
PLIN4  
PLL  
PLN  
PLP1  
PLPP1  
PLPP3  
PLXNA4  
PMP2  
PMP22  
PNPLA2  
PNPLA7  
PODN  
POLRMT  
POU6F1  
PPARG  
PPARGC1A  
PPM1H  
PPM1L  
PPM1M  
PPOX  
PPP1R15A  
PPP1R16A  
PPP1R1A  
PPP1R1B  
PPP1R9A  
PRELP  
PREX2  
PRG4  
PRKAG2-AS1  
PRKAR2B  
PRKD1  
PROM1  
PRR4  
PRRG3  
PRRT1  
PRX  
PSIP1  
PTCH1  
PTCH2  
PTGDS  
PTGFR  
PTGIS  
PTH1R  
PTN  
PTPRM  
PTPRT  
PWAR6

PYGM  
PYROXD2  
QDPR  
RAB17  
RAB3A  
RAB3IL1  
RAB40B  
RAB6B  
RABL2A  
RAI2  
RAMP2  
RARA  
RASA4  
RASD1  
RASGRF2  
RASL11A  
RBM24  
RBP4  
RBP7  
RBPMS2  
RCAN2  
RCL1  
RDH5  
RECK  
REEP2  
RELN  
RERG  
RERGL  
RETSAT  
RFNG  
RFX2  
RFX3  
RGAG4  
RGCC  
RGMA  
RGMB  
RGN  
RGS2  
RGS22  
RHOBTB3  
RHOJ  
RHOXF1-AS1  
RILP  
RNF122  
RNF125  
RNF150  
RNF165  
RNF180  
ROBO2  
ROPN1  
ROPN1B  
ROR1  
RP1-239B22.5  
RP1-257A7.5  
RP11-1100L3.8  
RP11-141015.1

RP11-161M6.2  
RP11-175B9.3  
RP11-20024.4  
RP11-234A1.1  
RP11-285F7.2  
RP11-310K10.1  
RP11-321G12.1  
RP11-363E7.4  
RP11-420A23.1  
RP11-466H18.1  
RP11-543P15.1  
RP11-553L6.5  
RP11-568K15.1  
RP11-617F23.1  
RP11-632C17\_\_A.1  
RP11-694I15.7  
RP11-726G1.1  
RP11-747H7.3  
RP11-761N21.2  
RP11-774O3.3  
RP11-834C11.4  
RP11-983P16.4  
RP3-406A7.7  
RP3-417G15.1  
RP4-706A16.3  
RPH3AL  
RPL10A  
RPL10P9  
RPL13  
RPL13A  
RPL13AP5  
RPL13P12  
RPL15  
RPL15P3  
RPL23  
RPL26  
RPL26P19  
RPL29  
RPL3  
RPL31  
RPL32  
RPL34  
RPL37A  
RPL3P4  
RPL4P4  
RPS15  
RPS15A  
RPS23  
RPS23P8  
RPS24  
RPS25  
RPS27  
RPS4X  
RPS6  
RPS8  
RPS9

RRAGD  
RSAD1  
RSPO1  
RSPO3  
RUNX3  
RUSC2  
RXRG  
SALL2  
SAMD5  
SBK1  
SBSPON  
SCAP  
SCARA3  
SCARA5  
SCARB1  
SCGB1B2P  
SCGB1D2  
SCGB2A1  
SCGB2A2  
SCN4A  
SCN4B  
SCN7A  
SCRG1  
SCRN2  
SCUBE2  
SCUBE3  
SDPR  
SELENBP1  
SELENOP  
SELP  
SEMA3D  
SEMA3E  
SEMA3G  
SEMA6A  
SEMA6B  
SEMA6C

4-Sep

SERHL2  
SERPINA5  
SERPINF1  
SESN1  
SETMAR  
SEZ6L  
SFRP1  
SFRP5  
SGCA  
SGCD  
SGCG  
SGSM1  
SH3BGR  
SH3BGRL2  
SH3BP5-AS1  
SH3BP5  
SHC2  
SHC4  
SHE

SHF  
SHISA9  
SHMT1  
SHROOM3  
SIDT2  
SIK1  
SIK2  
SLAIN1  
SLC12A2  
SLC12A7  
SLC13A2  
SLC14A1  
SLC16A11  
SLC16A14  
SLC17A7  
SLC1A2  
SLC1A7  
SLC22A17  
SLC25A23  
SLC25A25  
SLC25A29  
SLC25A4  
SLC25A6  
SLC26A2  
SLC26A7  
SLC27A1  
SLC27A6  
SLC29A1  
SLC29A2  
SLC2A4  
SLC34A2  
SLC35F1  
SLC43A1  
SLC43A3  
SLC45A2  
SLC47A1  
SLC6A4  
SLC7A2  
SLC9A2  
SLCO2A1  
SLCO4A1-AS1  
SLCO4C1  
SLIT2  
SLIT3  
SLITRK2  
SLITRK4  
SMARCA2  
SMARCD3  
SMCO4  
SMIM10  
SMIM10L2A  
SMO  
SMOC2  
SNCA  
SNCG  
SNED1

SNHG5  
SNHG6  
SNHG8  
SNRK  
SNTB1  
SNX21  
SOBP  
SOCS3  
SOD3  
SORBS1  
SORBS2  
SORBS3  
SORCS1  
SOSTDC1  
SOX10  
SOX13  
SOX17  
SOX5  
SOX8  
SOX9-AS1  
SOX9  
SPARCL1  
SPATA13  
SPATA6  
SPDEF  
SPRY1  
SPRY2  
SPTBN1  
SPTBN4  
SRF  
SRL  
SSBP2  
SSC5D  
ST3GAL4  
ST6GAL1  
STAB2  
STAC2  
STAT5A  
STK32A  
STK32B  
STMN2  
STMN3  
STOX1  
STUM  
STXBP6  
SUSD2  
SV2B  
SVEP1  
SVIP  
SYBU  
SYN2  
SYNE1  
SYNE3  
SYNGR1  
SYNPO2  
SYT17

TAC1  
TACR1  
TAGLN  
TBC1D16  
TBC1D4  
TCEA3  
TCEAL2  
TCEAL3  
TCEAL7  
TCF7L1  
TCF7L2  
TECRP1  
TESC  
TFAP2B  
TFF3  
TG  
TGFBR3  
THBS4  
THRA  
THRSP  
TIMP2  
TIMP4  
TK2  
TLE2  
TMA7  
TMC4  
TMEM100  
TMEM116  
TMEM119  
TMEM132C  
TMEM133  
TMEM139  
TMEM150C  
TMEM178A  
TMEM213  
TMEM220  
TMEM231  
TMEM25  
TMEM47  
TMEM55A  
TMEM56  
TMEM8B  
TMEM98  
TMOD1  
TMPRSS2  
TMPRSS5  
TMPRSS6  
TMTc1  
TNFRSF14  
TNFSF12  
TNMD  
TNN  
TNNC1  
TNNC2  
TNNT2  
TNNT3



TNRC6C  
TNS1  
TNS2  
TNXB  
TOB1  
TOMM7  
TP53  
TP73-AS1  
TPPP  
TPPP3  
TRAPPC6A  
TRES1  
TRIM63  
TRIM8  
TRO  
TRPC1  
TRPM1  
TRPV4  
TRPV6  
TSC22D1  
TSC22D3  
TSHZ1  
TSPAN12  
TSPAN18  
TSPAN4  
TSPAN8  
TSPOAP1  
TSPYL2  
TTC28  
TTC38  
TTC3P1  
TTYH1  
TUB  
TUBA1A  
TUSC5  
UBE2QL1  
UNC5C  
USP11  
USP13  
USP36  
USP54  
UST  
VAMP2  
VAMP5  
VASN  
VEGFB  
VEPH1  
VIM  
VPS51  
VSIG8  
VTCN1  
WBSCR17  
WFDC2  
WFDC3  
WIF1  
WIPF3

WISP2  
WNK2  
WSCD1  
WTIP  
XPNPEP2  
YPEL4  
ZBED3  
ZBTB10  
ZBTB16  
ZBTB47  
ZCCHC24  
ZDHC11  
ZDHC11B  
ZDHC15  
ZEB2  
ZFP36  
ZFP36L1  
ZFP36L2  
ZG16B  
ZIK1  
ZMAT1  
ZNF135  
ZNF273  
ZNF331  
ZNF358  
ZNF385D  
ZNF415  
ZNF423  
ZNF471  
ZNF521  
ZNF542P  
ZNF577  
ZNF667-AS1  
ZNF667  
ZNF677  
ZNF703  
ZNF704  
ZNF853  
ZSCAN18

### Supplementary Table 2-9. SCC-overlap

137 common elements in "SCC-UP-H3K27ac" and "SCC-UP-mRNA":

BPGM  
GZMA  
CXCL13  
SLC7A5  
BICD1  
PTGFRN  
CAB39  
CDK5R1  
LRRC8D  
SLC28A3  
HIF1A  
LGALS9B  
PRKCQ  
DENND1B  
FOXN2  
ADAM12  
TDO2  
NRIP1  
TLDC1  
GJB6  
CREG2  
CAP1  
POPDC3  
RIMS3  
RTKN2  
MAPK6  
STARD4  
NREP  
HSPA8  
PRDM1  
ARTN  
SLC16A1  
NUAK2  
IFI44  
PARP14  
MMP3  
BLZF1  
PCSK6  
VRK2  
PLK1  
BRCA2  
DCBLD1  
S100A12  
SULF2  
FRMD6  
TARS  
ESM1  
FZD6  
S100A8  
KLF7  
SLC16A9  
SLC36A1  
ACTR3

191 common elements in "SCC-DOWN-H3K27ac" and "SCC-DOWN-mRNA":

PALM  
ZSCAN18  
STK32A  
ATF3  
NTRK2  
NLGN1  
C2orf88  
GALNT16  
ACADL  
FAHD2A  
KLF15  
RFX2  
FOS  
HRASLS5  
GFRA1  
TMEM55A  
CNTFR  
EVA1C  
RNF180  
FOSB  
ALDH3A2  
NFC  
CKB  
SBSPON  
SIK1  
TIMP4  
RRAGD  
NFIB  
TNXB  
SYBU  
SOX13  
ECHDC3  
CTGF  
NACAD  
KCNB1  
NXPH3  
AKAP12  
AOX1  
NTN4  
FAM189A2  
TRPC1  
SOX10  
SLC25A4  
EGR1  
CREB5  
SCARA5  
MAPK4  
TCEAL3  
RBM24  
SHC2  
BACH2  
SLITRK2  
TUB

NEK2  
FAM83D  
GBP6  
P2RY2  
KIFC1  
MREG  
SLFN5  
OASL  
TMPRSS4  
AIM2  
MKI67  
TRIM14  
PIK3CD  
FAM49B  
DLGAP5  
CDK1  
MOCOS  
PLEK2  
WISP1  
SLC2A1  
CENPN  
SLC2A9  
CTSC  
ADCY7  
CORO6  
MOB1A  
OAS1  
STON2  
ZNF114  
SLC4A8  
OAS2  
SERPINB1  
AKR1B15  
WNT5A  
NDC80  
P2RY1  
RMI1  
MYO1B  
GSG2  
SAMD9  
TNIP3  
YWHAQ  
SLAMF7  
GJA1  
MYO5A  
CSNK1A1  
LAMA3  
CNGB1  
PTHLH  
PDP1  
UBASH3B  
MMP13  
CCNE1  
FABP5  
RALB  
IFIH1

PDLIM3  
RELN  
INSR  
CACNB2  
TLE2  
ROBO2  
CYP4B1  
AQP7  
PKNOX2  
CGNL1  
GPRASP2  
GRIK3  
PRRG3  
SNED1  
SOD3  
METRNL  
MCF2L  
SYT17  
EMX2  
ACAT1  
SHF  
HLF  
GAS6  
EMID1  
ZG16B  
MT1M  
CDH22  
ISM1  
EDNRB  
FN3K  
MACROD2  
ANKS1B  
PLCE1  
RBP7  
LONRF3  
FGFR1  
ADCY2  
LTBP4  
ALDH1L1  
CHRM1  
GPT  
TCF7L1  
MEGF6  
EFNA5  
PDK4  
ADCY5  
FGF14  
CYP4V2  
ZDHHC11B  
IRS2  
EXTL1  
CRIP2  
SEMA3G  
ELN  
NPR2  
NCAM2

GPR1  
TENM2  
NCAPH  
SCG5  
PARP12  
ADAM10  
MB21D1  
IQGAP3  
VLDLR  
IFI6  
RAC2  
APOL6  
ATAD2  
GNPNAT1  
LEMD1  
ITGA6  
P4HA2  
TNFRSF21  
MTRF2  
RAD51  
LRIF1  
ENAH  
PARPBP  
MTPN  
STK17A  
ANKEF1  
ANXA3  
GALNT6  
LPCAT1  
ANLN

TMOD1  
NNMT  
GLI2  
NFI  
NBEA  
CDON  
SEMA3D  
TNNC2  
WFDC2  
ST3GAL4  
MPPED2  
HAS1  
PLLP  
HDAC5  
MAMDC2  
BOC  
CDC42EP4  
TPPP  
PER2  
NOVA1  
ESRRG  
RPL32  
LONRF2  
TFAP2B  
CPQ  
NOS1  
TMPRSS2  
ZBTB16  
RAI2  
LRRN1  
RAB17  
HES1  
RGMA  
ZNF135  
NFIA  
ZNF423  
KCNIP3  
DUSP8  
NECAB1  
NR4A1  
SLC47A1  
TNS1  
PPARG  
ATP6V1B1  
BEND7  
SORBS1  
STK32B  
GPX4  
MAMLD1  
IL34  
RUSC2  
HABP4  
ATP5D  
SCARA3  
FNDC4  
TCF7L2

MAP2K3  
EEDP1  
SLC7A2  
PKD1  
FBLN5  
ZBTB10  
ITGBL1  
PRELP  
ZDHHC11  
SSBP2  
MFAP4  
CHDH  
SLC12A7  
CSR1  
TMEM100  
AQP1  
SLIT3  
HMGCS2  
TMEM56  
CRISPLD2  
PDGFRL  
AOC3  
RAB3IL1  
GLUL  
CIDEA  
SCARB1  
STAC2  
CLIC6  
LRP3  
HAAO  
BCL6  
CKMT2  
MEDAG  
INHBB  
SOX9  
ZFP36L1  
ARHGEF26  
KLF4  
CABLES1  
NR2F1  
GMPR  
SYNE1  
PTGIS  
ZNF704  
MEF2D  
CELF2  
KLF2  
ST6GAL1  
TNRC6C  
PIM3  
ID4  
SUSD2  
SMOC2  
UST  
ITIH5  
PDE4B

LRRC32  
ZFP36L2  
STXBP6  
HUNK  
ANGPTL2  
NALCN  
PHGDH  
CLEC3B  
ADRB1  
NEDD9  
CXCL12  
ATOH8  
TGFB3  
DHRS12  
PKDCC  
RCAN2  
TBC1D16

**Supplementary Table 2-10. BCC-overlap**

125 common elements in "BCC-UP-H3K27ac" and "BCC-UP-mRNA":

COL3A1  
SLC7A5  
PRR3  
NOX4  
TRAF3IP3  
CDK5R1  
TOX2  
SLAMF8  
ADAMTS12  
DYRK2  
EFCAB1  
PTPRU  
MEX3B  
TGFB3  
GJB6  
JAG1  
SUPT3H  
DNMT3A  
CCR2  
WNT2  
FZD2  
ZNF618  
COL6A3  
CHST2  
NTM  
SLC1A4  
SPON2  
PSIP1  
TRIB2  
PLXDC1  
PRDM1  
FN1  
DIO2  
ERCC6L2  
ZNF469  
CAMK2G  
IFT80  
COL5A1  
CTHRC1  
PAPPA  
SULF2  
VGLL4  
ADAMTS14  
NRP2  
FAP  
ARHGEF26  
ZNF532  
ZNF697  
GADD45G  
SPECC1  
SH2B2  
MME  
BCL11B

31 common elements in "BCC-DOWN-H3K27ac" and "BCC-DOWN-mRNA":

NTRK2  
KIAA1456  
ADORA2B  
ACADL  
KLF15  
HRASLS5  
KCNK7  
CNTFR  
UAP1  
CKB  
CTGF  
FAM189A2  
RBM24  
RELN  
DBI  
MPV17L  
AGPAT3  
PCOLCE2  
PI16  
DUSP8  
NR4A1  
SLC47A1  
ATP6V1B1  
MOXD1  
ADAMTS15  
HLCS  
ZBTB7C  
KLF2  
STEAP3  
MFSD12  
RRAGD



MMD  
SLC16A9  
PROX1  
DUSP10  
TIGD2  
HMGA2  
DBF4B  
FYN  
C10orf99  
DFNA5  
LAMB1  
FGFR2  
ARL15  
FAM20C  
SACS  
SLC6A1  
IGF2BP2  
DLX2  
NINJ2  
HAPLN1  
BNC2  
MYCN  
EDN2  
SOX4  
PDGFA  
HECW2  
WNT5A  
WISP1  
ZMIZ1  
FMNL3  
MYO1B  
HMCN1  
CACNA2D3  
SAMD9  
CRYL1  
POSTN  
CTBP1  
NREP  
TDO2  
TTC30B  
LASP1  
CEP128  
CDK14  
SLC7A8  
FZD6  
NUAK1  
TGFB1  
CHRD  
TENM2  
ADAMTS2  
KCNU1  
COL27A1  
DIRAS2  
SCN8A  
PELI2  
FSIP2

INHBA  
COL1A1  
CABLES1  
LRIG3  
SETBP1  
EDN1  
OSBPL3  
BASP1  
HSPB3  
FAM76B  
IRX2  
SLC6A11  
CRNN  
DLX1  
B4GALNT3  
EDIL3  
LPCAT1  
UST

Supplementary Table 3. Accession Identifiers

Donor	BioSample ID	Biosample term name	ChIP-seq antibody		
			Input control	H3K27ac	H3K4me3
ENCDO799UNP	ENCBS238CLI	keratinocyte squamous cell carcinoma	ENCSR583XAM	ENCSR958CPV	ENCSR011KBS
ENCDO799UNP	ENCBS391IST	skin epidermis	ENCSR578ORB		
ENCDO054KII	ENCBS198XCO	keratinocyte squamous cell carcinoma	ENCSR306YLG	ENCSR683RFX	ENCSR291PVS
ENCDO054KII	ENCBS792ZTG	skin epidermis	ENCSR360NJD	ENCSR685XVI	
ENCDO736MLL	ENCBS078OEW	keratinocyte squamous cell carcinoma	ENCSR906OSH	ENCSR700LWI	
ENCDO736MLL	ENCBS329VRH	skin epidermis	ENCSR932WVK	ENCSR697MUJ	
ENCDO588YPS	ENCBS607OCB	keratinocyte squamous cell carcinoma	ENCSR529OPX	ENCSR321KDV	
ENCDO588YPS	ENCBS823ZBL	skin epidermis	ENCSR126UEY	ENCSR214UZE	
ENCDO317WFZ	ENCBS073GVF	keratinocyte squamous cell carcinoma	ENCSR071DPR	ENCSR235KRX	
ENCDO317WFZ	ENCBS497HUD	skin epidermis	ENCSR704QBF	ENCSR386CKJ	
ENCDO856JFL	ENCBS741KVA	keratinocyte squamous cell carcinoma	ENCSR966IGL	ENCSR869TDT	ENCSR822EOS
ENCDO856JFL	ENCBS115YGN	skin epidermis	ENCSR621OKB	ENCSR340ZTB	
ENCDO739SDJ	ENCBS606CVB	keratinocyte basal cell carcinoma	ENCSR465UAX	ENCSR531VWS	ENCSR720DYZ
ENCDO739SDJ	ENCBS488CYF	skin epidermis	ENCSR247FUH	ENCSR641YLG	ENCSR835YED
ENCDO017WNO	ENCBS649ZPH	keratinocyte basal cell carcinoma	ENCSR436NLU		
ENCDO017WNO	ENCBS826CAW	skin epidermis	ENCSR033XKQ	ENCSR194KGO	
ENCDO615YQP	ENCBS365XEJ	keratinocyte basal cell carcinoma	ENCSR111ZAD	ENCSR560BEL	
ENCDO615YQP	ENCBS214YHD	skin epidermis	ENCSR327PYZ	ENCSR919BBI	
ENCDO128KBJ	ENCBS786EKF	keratinocyte basal cell carcinoma	ENCSR438NOO	ENCSR207ABA	ENCSR074BEW
ENCDO128KBJ	ENCBS550MBO	skin epidermis	ENCSR568JFZ	ENCSR334DRN	
ENCDO180HAI	ENCBS721DMB	keratinocyte basal cell carcinoma	ENCSR785LQK	ENCSR397NQK	
ENCDO180HAI	ENCBS499OVL	skin epidermis	ENCSR988CHU	ENCSR156MYA	
ENCDO536XJQ	ENCBS486NQD	keratinocyte basal cell carcinoma	ENCSR564GJK	ENCSR339XMR	ENCSR644SHG
ENCDO536XJQ	ENCBS270GKZ	skin epidermis	ENCSR914HOJ	ENCSR969HBF	