

**Table S1. Target DNA fragments Enriched by ChIP-on-chip**

NAME	CHROMOSOME	PEAK_START	PEAK_END	PEAK_SCORE	p VALUE	GENE ID
DLGAP5	chr14	54727149	54728198	3.55	0.0000	9787
UVRAG	chr11	75201322	75204371	3.53	0.0000	7405
LOC158318	chr9	46276027	46278076	3.05	0.0000	158318
DOC1	chr3	101315047	101316897	3.02	0.0000	11259
TMEM67	chr8	94835620	94837069	3.02	0.0000	91147
CHURC1	chr14	64449792	64451341	2.94	0.0000	91612
BRIP1	chr17	57296237	57297397	2.88	0.0000	83990
NBPF9	chr1	146065183	146068277	2.82	0.0000	440670
STOML2	chr9	35092754	35094503	2.82	0.0000	30968
REXO1L1	chr8	86761620	86764077	2.79	0.0000	254958
SLC7A4	chr22	19717746	19718901	2.72	0.0000	6545
PRAMEF1	chr1	12773335	12774893	2.72	0.0000	65121
COPZ1	chr12	53003921	53004973	2.71	0.0000	22818
CLEC4C	chr12	7793636	7795091	2.68	0.0000	170482
HAAO	chr2	42872219	42873468	2.66	0.0000	23498
KIAA1279	chr10	70417712	70419361	2.66	0.0000	26128
LILRB3	chr19	59419509	59421062	2.65	0.0000	11025
NPIP	chr16	14936100	14938761	2.64	0.0000	9284
LOC652848	chr14	105875902	105879251	2.61	0.0000	652848
PRAMEF5	chr1	13229705	13233160	2.59	0.0000	343068
AMY1A	chr1	103999266	104000726	2.59	0.0000	276
IFP38	chr13_random	36719	38168	2.59	0.0000	83880
MGC50273	chr2	132276004	132277753	2.59	0.0000	408029
DMWD	chr19	50987700	50989149	2.56	0.0000	1762
CDR2L	chr17	70493726	70495183	2.56	0.0000	30850
LENG1	chr19	59354458	59356307	2.55	0.0001	79165
PRAMEF8	chr1	13262352	13264801	2.55	0.0001	391002
MINK1	chr17	4681599	4683448	2.54	0.0001	50488
KGFLP1	chr9	46525057	46526406	2.54	0.0001	387628
PRAMEF4	chr1	12868313	12871162	2.54	0.0001	400735
SF1	chr11	64302419	64303974	2.54	0.0001	7536
NBPF10	chr1	16790376	16792132	2.53	0.0001	440673
NBPF8	chr1	144768079	144770574	2.52	0.0001	641559
GAGE8	chrX	49110914	49112466	2.52	0.0001	26749
GPR125	chr4	22128070	22129228	2.52	0.0001	166647
AKAP4	chrX	49851849	49854799	2.51	0.0001	8852
GAGE5	chrX	49210223	49211776	2.51	0.0001	2577
HSPC047	chr7	101907186	101908942	2.51	0.0001	29060
ERVK6	chr7	4596243	4597295	2.50	0.0001	64006
ZNF287	chr17	16413489	16415849	2.50	0.0001	57336
CBWD1	chr2	113911152	113912801	2.49	0.0001	55871
USP30	chr12	107973573	107975122	2.49	0.0001	84749
CEP152	chr15	46890419	46892169	2.49	0.0001	22995

TMOD4	chr1	149415350	149416599	2.47	0.0001	29765
GAGE8	chrX	49101292	49102944	2.47	0.0001	26749
KATNAL2	chr18	42780684	42781741	2.47	0.0001	83473
GCKR	chr2	27572909	27574258	2.46	0.0001	2646
NBPF20	chr1	143325415	143327275	2.45	0.0001	400818
DUB3	chr8	12032678	12034427	2.45	0.0001	377630
OGFR	chr20	60904121	60905470	2.44	0.0001	11054
LOC158572	chrX	49530960	49533110	2.44	0.0001	158572
PLEKHG5	chr1	6501656	6504509	2.43	0.0001	57449
BMP10	chr2	68953153	68954802	2.43	0.0001	27302
LOC400986	chr2	95974096	95975854	2.43	0.0001	400986
RINT1	chr7	104958586	104959936	2.43	0.0001	60561
IL28A	chr19	44448296	44449945	2.43	0.0001	282616
LOC389833	chr21_random	164870	166419	2.42	0.0001	389833
WBSCR19	chr7	44004813	44006762	2.42	0.0001	285955
ZNF540	chr19	42731647	42732696	2.42	0.0001	163255
FLJ46210	chr3	140246224	140247583	2.41	0.0001	389152
SSPN	chr12	26237088	26239044	2.41	0.0001	8082
TSHZ3	chr19	36462925	36464674	2.41	0.0001	57616
LOC284861	chr22	19864502	19868051	2.41	0.0001	284861
FAM105B	chr5	14731548	14732797	2.40	0.0001	90268
OSTbeta	chr15	63128009	63129165	2.40	0.0001	123264
N/A	chr17	57706770	57709419	2.39	0.0001	
KIAA1026	chr1	14795299	14796352	2.39	0.0002	23254
LRRC32	chr11	76057643	76059092	2.39	0.0002	2615
CST11	chr20	23381682	23383338	2.38	0.0002	140880
LOC554226	chr2	132636698	132638651	2.38	0.0002	554226
PPFIA4	chr1	201286033	201287882	2.38	0.0002	8497
PIN1	chr19	9805398	9806747	2.37	0.0002	5300
AANAT	chr17	71960783	71962334	2.37	0.0002	15
FLJ42289	chr15	98708757	98710606	2.37	0.0002	388182
C3orf25	chr3	130629284	130631145	2.37	0.0002	90288
SLC35B1	chr17	45141481	45142932	2.36	0.0002	10237
FOXD4L4	chr9	69670351	69672200	2.36	0.0002	349334
FLJ45445	chr19	152328	154488	2.36	0.0002	399844
OR52R1	chr11	4783123	4784273	2.35	0.0002	119695
NALP12	chr19	59002971	59004420	2.35	0.0002	91662
CCNB3	chrX	50042275	50045230	2.35	0.0002	85417
NBPF15	chr1	146826017	146828366	2.35	0.0002	284565
N/A	chr1	146712653	146715505	2.35	0.0002	
ASAP	chr4	156517172	156518729	2.35	0.0002	79884
C9orf24	chr9	34372099	34373748	2.34	0.0002	84688
RNASE2	chr14	20490969	20492118	2.34	0.0002	6036
CDC2L2	chr1	1639829	1641387	2.34	0.0002	985
KRT6B	chr12	51131130	51132179	2.33	0.0002	3854
C1orf36	chr1	209731982	209734031	2.33	0.0002	343035
ATP6VOD2	chr8	87179354	87181104	2.33	0.0002	245972

PHLDB2	chr3	113084899	113086455	2.33	0.0002	90102
LOC401507	chr9	39889344	39890493	2.32	0.0002	401507
MGC42630	chr9	67375447	67379096	2.32	0.0002	286301
GOLGA8A	chr15	32486180	32487629	2.32	0.0002	23015
S100A3	chr1	151789358	151791007	2.32	0.0002	6274
DKFZp564N24	chr7	53068442	53069797	2.31	0.0002	285877
YWHAQ	chr2	9688657	9689717	2.31	0.0002	10971
PRAMEF7	chr1	12897608	12899763	2.31	0.0003	441871
CNOT3	chr19	59331060	59332409	2.31	0.0003	4849
GPR15	chr3	99732473	99733527	2.30	0.0003	2838
RASSF5	chr1	204794534	204795983	2.30	0.0003	83593
GSR	chr8	30705826	30707279	2.30	0.0003	2936
PEF1	chr1	31883064	31884713	2.30	0.0003	553115
LENG8	chr19	59649512	59651075	2.30	0.0003	114823
tcag7.1017	chr7	99741960	99744109	2.30	0.0003	441272
SHOX2	chr3	159302524	159303873	2.29	0.0003	6474
N/A	chr19	11344482	11346231	2.29	0.0003	
LCE3C	chr1	150839432	150840481	2.29	0.0003	353144
RETNLB	chr3	109957820	109959569	2.29	0.0003	84666
CSTA	chr3	123526008	123527666	2.29	0.0003	1475
MARK2	chr11	63417106	63418258	2.28	0.0003	2011
NBPF14	chr1	146491472	146493121	2.28	0.0003	25832
MS4A8B	chr11	60222622	60224371	2.28	0.0003	83661
SLC35A2	chrX	48654861	48656539	2.28	0.0003	7355
PARP15	chr3	123815214	123818170	2.28	0.0003	165631
C14orf129	chr14	95913074	95914631	2.28	0.0003	51527
PRAMEF9	chr1	13511859	13515315	2.28	0.0003	343070
INO80B	chr2	74535353	74536702	2.28	0.0003	83444
PMF1	chr1	154446739	154448588	2.28	0.0003	11243
EDN3	chr20	57306193	57308042	2.27	0.0003	1908
SCYL1	chr11	65046658	65048007	2.27	0.0003	57410
OR4X2	chr11	48220531	48221580	2.26	0.0003	119764
PSG1	chr19	48075011	48076160	2.26	0.0003	5669
LOC205251	chr2	110337606	110338667	2.26	0.0003	205251
FOXD4L4	chr9	69668751	69670305	2.26	0.0003	349334
SLC41A3	chr3	127286732	127288081	2.26	0.0003	54946
CIB4	chr2	26717015	26718567	2.26	0.0004	130106
RP11-119E20	chrX	50573984	50575833	2.25	0.0004	57477
LOC504188	chr9	45621954	45624303	2.25	0.0004	504188
WWC2	chr4	184351461	184352710	2.25	0.0004	80014
RP11-561O23	chr9	70104902	70108551	2.25	0.0004	286380
IRX1	chr5	3646467	3648016	2.25	0.0004	79192
PTAFR	chr1	28376478	28377827	2.25	0.0004	5724
FGF23	chr12	4358255	4359504	2.25	0.0004	8074
SMURF2	chr17	60089457	60090911	2.25	0.0004	64750
KRTAP10-1	chr21	44784906	44786455	2.25	0.0004	386677
SHC4	chr15	46954881	46956330	2.24	0.0004	399694

EFHC1	chr6	52392670	52394019	2.24	0.0004	114327
DEFB108B	chr11	71220497	71221954	2.24	0.0004	245911
LAPTM4B	chr8	98855084	98856133	2.24	0.0004	55353
KRT6C	chr12	51172240	51173589	2.24	0.0004	140446
LILRB1	chr19	59819840	59821092	2.23	0.0004	10859
CASC2	chr10	119795994	119797643	2.23	0.0004	255082
ALDH3A1	chr17	19593700	19594852	2.23	0.0004	218
TBC1D3B	chr17	31527050	31529399	2.23	0.0004	414059
K6HF	chr12	51113473	51114722	2.23	0.0004	9119
KCNJ9	chr1	158315983	158317632	2.23	0.0004	3765
FLJ39257	chr4	4109567	4112717	2.22	0.0004	650346
CDK3	chr17	71506913	71508162	2.22	0.0004	1018
ERAS	chrX	48571226	48572683	2.22	0.0004	3266
MGC50811	chr2	218927322	218928678	2.22	0.0004	375307
DKFZP434004	chr17	25908009	25909558	2.22	0.0004	26083
MLL3	chr7	151566322	151568072	2.22	0.0004	58508
HOXB6	chr17	44038747	44039806	2.22	0.0004	3216
RGPD5	chr2	109905023	109907072	2.22	0.0004	84220
PKD1L1	chr7	47955962	47957111	2.22	0.0004	168507
OR2F1	chr7	143287596	143288945	2.22	0.0005	26211
FLJ16478	chr1	155337424	155338583	2.21	0.0005	440695
BMP15	chrX	50667823	50669482	2.21	0.0005	9210
OR2T5	chr1	246718212	246719361	2.21	0.0005	401993
ZNF80	chr3	115440514	115441863	2.21	0.0005	7634
FLJ39743	chr15	96874934	96876783	2.21	0.0005	283777
RP11-255A11	chr9	33511812	33514161	2.21	0.0005	441459
H2AFB1	chrX	153764610	153765961	2.20	0.0005	474382
RAB7	chr3	129925268	129926317	2.20	0.0005	7879
TBC1D3B	chr17	31615072	31617821	2.20	0.0005	414059
IFNA17	chr9	21219723	21220783	2.20	0.0005	3451
HSD3B2	chr1	119756695	119758044	2.20	0.0005	3284
IFP38	chr13_random	35219	36368	2.20	0.0005	83880
PDE4DIP	chr1	143787484	143788733	2.19	0.0005	9659
CASC4	chr15	42366920	42368269	2.19	0.0005	113201
WIPI2	chr7	5219725	5221374	2.19	0.0005	26100
UNQ6125	chr3	131244545	131245794	2.19	0.0005	442092
TBC1D3	chr17	33601396	33603854	2.19	0.0005	84218
TSKU	chr11	76169632	76171681	2.19	0.0005	25987
RAB11FIP1	chr8	37849854	37851203	2.19	0.0005	80223
ZNF595	chr4	40526	42975	2.18	0.0006	152687
KRTAP5-11	chr11	70970569	70972629	2.18	0.0006	440051
CLC	chr19	44920408	44922957	2.18	0.0006	1178
TTC5	chr14	19842976	19844225	2.18	0.0006	91875
FLJ41327	chr2	242616879	242618438	2.18	0.0006	401045
GNLY	chr2	85772324	85773979	2.18	0.0006	10578
FXYD3	chr19	40295938	40297196	2.18	0.0006	5349
AHSG	chr3	187811580	187812629	2.18	0.0006	197

LOC388692	chr1	147552377	147553726	2.18	0.0006	388692
OR2T2	chr1	246680121	246681677	2.17	0.0006	401992
TMF1	chr3	69183927	69185280	2.17	0.0006	7110
GPHA2	chr11	64460136	64461592	2.17	0.0006	170589
LOC650293	chr4	9093711	9095570	2.17	0.0006	650293
CHRNA6	chr8	42741776	42743029	2.17	0.0006	8973
YWHAQ	chr2	9689871	9691220	2.17	0.0006	10971
CD200R1	chr3	114177832	114179290	2.17	0.0006	131450
N/A	chr5	43161850	43163006	2.17	0.0006	
SLC4A8	chr12	50103060	50104309	2.17	0.0006	9498
CTSK	chr1	149047736	149050099	2.16	0.0006	1513
SLC5A10	chr17	18792017	18793366	2.16	0.0006	125206
ATP2B2	chr3	10468146	10469200	2.16	0.0006	491
FAM99A	chr11	1640972	1642221	2.16	0.0006	387742
KRT6E	chr12	51152826	51153975	2.16	0.0006	286887
ZNF536	chr19	35552467	35554716	2.16	0.0006	9745
RSHL3	chr6	117043959	117045308	2.16	0.0006	345895
OR6N1	chr1	157002096	157003745	2.16	0.0006	128372
AHRR	chr5	355990	357339	2.16	0.0006	57491
RPL29	chr3	52005398	52006447	2.16	0.0007	6159
OR4F17	chr19	61481	62530	2.15	0.0007	81099
FRG1	chr4	191097267	191098816	2.15	0.0007	2483
FOXD4L1	chr2	113970530	113974079	2.15	0.0007	200350
ZNF747	chr16	30454899	30456048	2.15	0.0007	65988
C10orf129	chr10	96942146	96943704	2.15	0.0007	142827
CSNK1D	chr17	77826162	77827311	2.15	0.0007	1453
DUX1	chr10	135339156	135341421	2.15	0.0007	26584
TRIM42	chr3	141878170	141879727	2.15	0.0007	287015
Rgr	chr22	22362747	22363996	2.15	0.0007	266747
FLJ40296	chr13	56610952	56612701	2.15	0.0007	122183
UGCGL1	chr2	128562554	128564203	2.15	0.0007	56886
OR2M2	chr1	246407810	246410863	2.15	0.0007	391194
NBPF4	chr1	108587196	108588645	2.15	0.0007	148545
TPD52L3	chr9	6316509	6318266	2.15	0.0007	89882
C17orf47	chr17	53975682	53977534	2.14	0.0007	284083
TSPYL2	chrX	53125886	53127635	2.14	0.0007	64061
C7orf29	chr7	149655370	149657119	2.14	0.0007	113763
LOC349114	chr7	39796524	39798073	2.14	0.0007	349114
LBP	chr20	36405998	36407451	2.14	0.0007	3929
EIF4A1	chr17	7414167	7415416	2.14	0.0007	1973
HRASLS2	chr11	63086431	63087480	2.14	0.0007	54979
CBWD3	chr9	70044104	70045860	2.14	0.0007	445571
CRYBA4	chr22	25345591	25346940	2.14	0.0007	1413
LOC128192	chr1	45226043	45227492	2.13	0.0007	128192
OLFM1	chr9	137104391	137105540	2.13	0.0007	10439
GPR128	chr3	101809434	101810983	2.13	0.0007	84873
LOC390980	chr19	62454114	62455571	2.13	0.0008	390980

NUDT10	chrX	51089222	51091578	2.13	0.0008	170685
GAB2	chr11	77729574	77730833	2.13	0.0008	9846
SGEF	chr3	155320499	155321648	2.13	0.0008	26084
PRAMEF10	chr1	12881975	12883333	2.13	0.0008	343071
KRTAP19-4	chr21	30790799	30792460	2.12	0.0008	337971
PSG5	chr19	48384486	48385842	2.12	0.0008	5673
GRHL1	chr2	10017744	10019694	2.12	0.0008	29841
SCGB1C1	chr11	180379	181934	2.12	0.0008	147199
TMCO5	chr15	36014448	36015605	2.12	0.0008	145942
EPN2	chr17	19079702	19080851	2.12	0.0008	22905
CBWD5	chr9	69728927	69730576	2.12	0.0008	220869
HAAO	chr2	42873919	42875182	2.12	0.0008	23498
EHF	chr11	34598943	34600192	2.12	0.0008	26298
IQSEC3	chr12	54602	56651	2.11	0.0008	440073
KRTAP10-9	chr21	44868867	44870117	2.11	0.0008	386676
OR11H12	chr14	18446293	18448342	2.11	0.0008	440153
KRTHB4	chr12	51064684	51066233	2.11	0.0008	3890
LOC441426	chr9	42355698	42356759	2.11	0.0008	441426
TGM4	chr3	44889430	44890979	2.11	0.0009	7047
MAGEH1	chrX	55492562	55494318	2.11	0.0009	28986
MAP4	chr3	47928107	47929457	2.11	0.0009	4134
PPIAL4	chr1	146421043	146422492	2.11	0.0009	164022
ZNF364	chr1	144323292	144324341	2.10	0.0009	27246
ORM2	chr9	116129289	116130939	2.10	0.0009	5005
LOC163131	chr19	45249579	45250734	2.10	0.0009	163131
ZIC4	chr3	148606097	148607146	2.10	0.0009	84107
OR1S1	chr11	57738192	57739741	2.10	0.0009	219959
CDK2AP2	chr11	67032378	67033827	2.10	0.0009	10263
PITPNM1	chr11	67032678	67033827	2.10	0.0009	9600
STX12	chr1	27967420	27968775	2.10	0.0009	23673
CDK4	chr12	56432531	56434283	2.09	0.0009	1019
FLJ45832	chr20	28136074	28137523	2.09	0.0009	400841
SLC7A10	chr19	38410070	38411125	2.09	0.0009	56301
C16orf5	chr16	4504957	4506013	2.09	0.0009	29965
ZNF550	chr19	62758537	62759586	2.09	0.0009	162972
RIT1	chr1	154148754	154150410	2.09	0.0009	6016
RAB41	chrX	69416092	69417242	2.09	0.0009	347517
SPATA2	chr20	47965875	47967435	2.09	0.0009	9825
LOC349196	chr8	7108028	7109677	2.09	0.0010	349196
BLCAP	chr20	35590917	35592366	2.09	0.0010	10904
EID-3	chr19	44715434	44717983	2.09	0.0010	126272
HSPA6	chr1	159758259	159760108	2.09	0.0010	3310
KIR2DL4	chr19	60005780	60007829	2.09	0.0010	3805
CBWD1	chr9	70045911	70047665	2.09	0.0010	55871
GALIG	chr14	54671451	54673200	2.09	0.0010	81625
UGT1A1	chr2	234330957	234332316	2.09	0.0010	54658
PSMD12	chr17	62793883	62795335	2.09	0.0010	5718

FOXD4	chr9	107419	110787	2.08	0.0010	2298
OR4D1	chr17	53584813	53586369	2.08	0.0010	26689
SLC1A7	chr1	53382337	53383488	2.08	0.0010	6512
RP6-166C19.1	chrX	119899597	119901354	2.08	0.0010	255313
LRRC35	chr11	120398639	120400188	2.08	0.0010	219899
KIAA0355	chr19	39479820	39481378	2.08	0.0010	9710
LOC389834	chr4_random	736850	738504	2.08	0.0010	389834
SLC7A14	chr3	171788152	171789214	2.08	0.0010	57709
PJCG6	chr8	7092384	7095133	2.08	0.0010	645642
SLA	chr8	134142528	134144177	2.08	0.0010	6503
FLJ43390	chr14	61667229	61668688	2.07	0.0010	646113
FAM38B	chr18	10687814	10689263	2.07	0.0011	63895
PPP1R3F	chrX	49011360	49013109	2.07	0.0011	89801
NCOA5	chr20	44151787	44153042	2.07	0.0011	57727
SPANXC	chrX	140163312	140164961	2.07	0.0011	64663
MGC5242	chr7	134506809	134508266	2.07	0.0011	78996
MMP21	chr10	127454580	127455637	2.07	0.0011	118856
BACE2	chr21	41458897	41460146	2.07	0.0011	25825
OR6A2	chr11	6772715	6773964	2.07	0.0011	8590
OR2W3	chr1	246125211	246126360	2.07	0.0011	343171
C10orf26	chr10	104523795	104524847	2.07	0.0011	54838
TR2IT1	chr3	127809488	127810748	2.07	0.0011	645840
OR5K4	chr3	99555302	99556351	2.06	0.0011	403278
LOC644808	chr1	45081503	45083084	2.06	0.0011	644808
CYP3A4	chr7	99220544	99222096	2.06	0.0011	1576
CYP4F11	chr19	15907926	15908975	2.06	0.0011	57834
MGC34761	chr16	68763428	68764477	2.06	0.0011	283971
STRC	chr15	41698090	41699539	2.06	0.0011	161497
FSD2	chr15	81272082	81273538	2.06	0.0011	123722
GDPD4	chr11	76675311	76677260	2.06	0.0011	220032
ISGF3G	chr14	23698271	23699520	2.06	0.0011	10379
NP	chr14	20006204	20007853	2.06	0.0011	4860
C21orf124	chr21	43970710	43971859	2.06	0.0011	85006
OCM	chr7	97458252	97459501	2.06	0.0011	4951
DEFB123	chr20	29489571	29491320	2.05	0.0012	245936
ANKFN1	chr17	51583134	51585083	2.05	0.0012	162282
NRAS	chr1	115061960	115063616	2.05	0.0012	4893
PARP6	chr15	70347623	70348774	2.05	0.0012	56965
LCE2A	chr1	150934763	150936123	2.05	0.0012	353139
LOC441956	chr21	13976034	13977983	2.05	0.0012	441956
LOC90925	chr14	106332337	106333396	2.05	0.0012	90925
CBWD1	chr9	169932	171481	2.05	0.0012	55871
ARMC7	chr17	70616476	70617725	2.05	0.0012	79637
LOC653107	chr10	47873130	47874579	2.05	0.0012	653107
LG MN	chr14	92285465	92286626	2.04	0.0012	5641
ALKBH6	chr19	41198495	41199544	2.04	0.0012	84964
HCLS1	chr3	122861405	122864462	2.04	0.0012	3059

GOLGA8B	chr15	32612503	32613564	2.04	0.0012	440270
FBXO40	chr3	122792653	122793710	2.04	0.0013	51725
LOC401622	chrX	154234751	154235900	2.04	0.0013	401622
LOC389833	chr4_random	555387	556449	2.04	0.0013	389833
FCRL1	chr1	156057615	156058678	2.04	0.0013	115350
ERVK6	chr7	4597647	4598896	2.04	0.0013	64006
EHMT1	chr9	139724437	139726187	2.04	0.0013	79813
FLJ45508	chr12	105376712	105378561	2.04	0.0013	643721
PFDN5	chr12	51974383	51975532	2.04	0.0013	5204
CDRT4	chr17	15310650	15312199	2.03	0.0013	284040
ASPH	chr8	62766141	62767590	2.03	0.0013	444
PSG9	chr19	48465020	48466069	2.03	0.0013	5678
OR1G1	chr17	2977295	2978844	2.03	0.0013	8390
VWF	chr12	6104297	6105546	2.03	0.0013	7450
RP11-262H14	chr9	41944931	41946190	2.03	0.0013	389741
VAR5	chr6	31872922	31874071	2.03	0.0013	7407
SIRT7	chr17	77469732	77471281	2.03	0.0013	51547
DLEC1	chr3	38054199	38056050	2.03	0.0014	9940
ZFP42	chr4	189151218	189152767	2.03	0.0014	132625
LOC440348	chr16	72967172	72969521	2.03	0.0014	440348
KRTHB6	chr12	50980715	50982464	2.03	0.0014	3892
PRAMEF10	chr1	12880375	12881440	2.02	0.0014	343071
DYRK4	chr12	4566904	4568754	2.02	0.0014	8798
ITPR2	chr12	26878498	26879947	2.02	0.0014	3709
BMS1L	chr10	42598064	42599213	2.02	0.0014	9790
C6orf65	chr6	56925346	56926396	2.02	0.0014	221336
THAP3	chr1	6605738	6607394	2.02	0.0014	90326
CACNG5	chr17	62301212	62302361	2.02	0.0014	27091
C1orf14	chr1	181190082	181191731	2.02	0.0014	81626
IGFL3	chr19	51319077	51320226	2.02	0.0014	388555
C1orf136	chr1	229900430	229901879	2.02	0.0014	400574
NDUFA9	chr12	4626504	4627857	2.02	0.0014	4704
USP6	chr17	4971310	4973359	2.02	0.0014	9098
WDFY3	chr4	86038399	86039648	2.02	0.0014	23001
LOC389832	chr21_random	1206276	1208025	2.01	0.0015	389832
PSMB9	chr6	32927215	32928664	2.01	0.0015	5698
CBWD2	chr2	113909352	113910716	2.01	0.0015	150472
FLJ45340	chr7	128081832	128083281	2.01	0.0015	402483
TXNDC6	chr3	139530518	139532267	2.01	0.0015	347736
LILRA2	chr19	59774370	59776720	2.01	0.0015	11027
FLJ16171	chr5	174355940	174356989	2.01	0.0015	441116
DSG2	chr18	27329502	27330668	2.01	0.0015	1829
ZBTB7B	chr1	153251147	153252396	2.01	0.0015	51043
TAS2R41	chr7	142883387	142884636	2.01	0.0015	259287
RBP2	chr3	140679442	140680498	2.01	0.0015	5948
TAS2R43	chr12	11136295	11137454	2.01	0.0015	259289
ABHD14A	chr3	51984366	51985715	2.01	0.0015	25864



GOLT1A	chr1	202451343	202452402	2.01	0.0015	127845
B3GALT3	chr3	162288944	162290001	2.01	0.0015	8706
RNF190	chr17	58239927	58241276	2.01	0.0015	162333
LOC90925	chr14	106329937	106331886	2.01	0.0015	90925
CTAGE6	chr7	142977511	142978667	2.01	0.0015	340307
TES	chr7	115635316	115636375	2.00	0.0015	26136
C3orf56	chr3	128393263	128394512	2.00	0.0016	285311
PARP14	chr3	123900159	123901218	2.00	0.0016	54625
XAGE1	chrX	52551264	52552425	2.00	0.0016	9503
LOC153561	chr5	69234358	69236007	2.00	0.0016	153561
SPDYA	chr2	28892166	28893222	2.00	0.0016	245711
OR5L1	chr11	55332818	55334367	2.00	0.0016	219437
EPPB9	chr17	19212651	19214102	2.00	0.0016	27077
DEFB109	chr8	7892053	7893702	2.00	0.0016	641517
LOC129530	chr2	99283974	99285423	2.00	0.0016	129530
PTPRS	chr19	5238199	5239848	2.00	0.0016	5802
GNAS	chr20	56845689	56847438	1.99	0.0016	2778
DTNB	chr2	25751007	25752558	1.99	0.0016	1838
RYR1	chr19	43613679	43614728	1.99	0.0017	6261
FCRL2	chr1	156004939	156006188	1.99	0.0017	79368
TAS2R4	chr7	141124057	141125706	1.99	0.0017	50832
CHR415SYT	chr4	68611010	68612163	1.99	0.0017	401135
LILRA1	chr19	59795424	59796973	1.99	0.0017	11024
AVIL	chr12	56496371	56498420	1.99	0.0017	10677
PLGLB2	chr2	87826220	87827375	1.99	0.0017	5342
LOC388503	chr19	10011655	10012904	1.99	0.0017	388503
OMP	chr11	76490133	76491282	1.98	0.0017	4975
RAB40B	chr17	78250041	78251796	1.98	0.0017	10966
ACCN1	chr17	28644719	28646468	1.98	0.0017	40
GPR133	chr12	130003389	130005038	1.98	0.0017	283383
MGC72104	chr20	28223839	28225288	1.98	0.0017	284802
BPIL2	chr22	31184573	31185722	1.98	0.0017	254240
UCN	chr2	27385358	27386907	1.98	0.0017	7349
SPRYD5	chr11	55409831	55410981	1.98	0.0017	84767
TEX101	chr19	48582402	48583453	1.98	0.0018	83639
TOP1MT	chr8	144489426	144490481	1.98	0.0018	116447
PDCD6	chr5	322438	323595	1.98	0.0018	10016
APEX2	chrX	55040804	55042153	1.98	0.0018	27301
DNAH9	chr17	11439972	11441428	1.98	0.0018	1770
ZNF683	chr1	26572053	26573802	1.98	0.0018	257101
LENG12	chr19	59737281	59740030	1.98	0.0018	90011
PSG6	chr19	48113150	48114499	1.97	0.0018	5675
CD80	chr3	120761039	120762288	1.97	0.0018	941
OR2T29	chr1	246788497	246789746	1.97	0.0018	343563
SLC22A12	chr11	64112257	64113808	1.97	0.0018	116085
RGPD2	chr2	86995548	86997005	1.97	0.0018	440872
NEK11	chr3	132225716	132226765	1.97	0.0018	79858

CHRNA1	chr2	175337016	175338565	1.97	0.0018	1134
SLA2	chr20	34708572	34709721	1.97	0.0019	84174
RIMBP2	chr12	129569763	129571012	1.97	0.0019	23504
POU5F1	chr6	31246438	31247687	1.97	0.0019	5460
C3orf34	chr3	197921928	197922984	1.97	0.0019	84984
ZNF236	chr18	72665003	72666057	1.97	0.0019	7776
S100A8	chr1	151630573	151631628	1.97	0.0019	6279
HSD11B1	chr1	207944513	207945662	1.97	0.0019	3290
PRAMEF2	chr1	12838427	12840286	1.97	0.0019	65122
KIAA1641	chr2	97494244	97495597	1.97	0.0019	57730
CCDC45	chr17	59934225	59935377	1.96	0.0019	90799
LOC284323	chr19	45281491	45283440	1.96	0.0019	284323
TNFRSF10C	chr8	23013678	23014739	1.96	0.0019	8794
OR4N4	chr15	19881336	19882807	1.96	0.0019	283694
PCMTD2	chr20	62354864	62355913	1.96	0.0019	55251
NOL1	chr12	6548941	6550190	1.96	0.0019	4839
H1FOO	chr3	130743547	130744596	1.96	0.0019	132243
SP7	chr12	52016604	52018467	1.96	0.0019	121340
HIPK4	chr19	45586934	45587983	1.96	0.0020	147746
ACTBL1	chr22	14666937	14668086	1.96	0.0020	23784
FLJ25773	chr14	98246902	98248551	1.96	0.0020	283598
GRK7	chr3	142978740	142979889	1.96	0.0020	131890
RAB7L1	chr1	204011750	204012901	1.96	0.0020	8934
PARS2	chr1	55002875	55004126	1.96	0.0020	25973
LOC653107	chr10	46594428	46596277	1.96	0.0020	653107
PCK1	chr20	55567642	55568991	1.96	0.0020	5105
SLA	chr8	134140628	134141778	1.96	0.0020	6503
SEMA4G	chr10	102720875	102722924	1.96	0.0020	57715
C5orf4	chr5	154181679	154183128	1.96	0.0020	10826
RP11-130N24	chrX	74062511	74063860	1.96	0.0020	340533
FCGR2C	chr1	159816153	159817205	1.96	0.0020	9103
ITIH4	chr3	52838734	52839783	1.96	0.0020	3700
KARCA1	chr1	159333477	159334530	1.95	0.0020	126823
AVPR1B	chr1	204389066	204390128	1.95	0.0020	553
CEP192	chr18	12996598	12998447	1.95	0.0020	55125
DEFA3	chr8	6863926	6865875	1.95	0.0020	1668
ISL1	chr5	50712425	50713474	1.95	0.0020	3670
RGN	chrX	46821718	46822768	1.95	0.0020	9104
EPAS1	chr2	46375366	46376725	1.95	0.0021	2034
LOC642759	chr10	127572897	127574653	1.95	0.0021	642759
LPP	chr3	189410714	189412070	1.95	0.0021	4026
GPR37L1	chr1	200356451	200357500	1.95	0.0021	9283
ORM1	chr9	116124056	116126105	1.95	0.0021	5004
PAPPA2	chr1	174696229	174697581	1.95	0.0021	60676
GRK1	chr13	113367594	113369043	1.95	0.0021	6011
RP11-196G18	chr1	148050138	148051187	1.95	0.0021	440689
FLJ43763	chr6	148012	149061	1.95	0.0021	642316

LOC653540	chr17	17082421	17083870	1.95	0.0021	653540
OR4K15	chr14	19513321	19514375	1.94	0.0021	81127
FCGR2B	chr1	159897564	159899219	1.94	0.0021	2213
FOXR2	chrX	55663857	55665011	1.94	0.0021	139628
OBP2B	chr9	135075849	135077098	1.94	0.0021	29989
CORT	chr1	10430657	10431715	1.94	0.0022	1325
IFI27	chr14	93644531	93645586	1.94	0.0022	3429
OR5M3	chr11	55993549	55994705	1.94	0.0022	219482
KRTAP9-4	chr17	36658972	36660421	1.94	0.0022	85280
MS4A3	chr11	59579515	59580678	1.94	0.0022	932
HRASLS2	chr11	63087831	63089080	1.94	0.0022	54979
TAS2R5	chr7	141133785	141134934	1.94	0.0022	54429
FBXO25	chr8	344107	345863	1.94	0.0022	26260
C20orf108	chr20	54366028	54367285	1.94	0.0022	116151
OR2T11	chr1	246856052	246857301	1.94	0.0022	127077
ZNHIT2	chr11	64642246	64643595	1.94	0.0022	741
ADAM21	chr14	69993869	69994923	1.94	0.0022	8747
SLC43A3	chr11	56950099	56951148	1.93	0.0022	29015
KEL	chr7	142371125	142372274	1.93	0.0022	3792
DKK4	chr8	42352931	42353980	1.93	0.0022	27121
CSH2	chr17	59303921	59305270	1.93	0.0022	1443
ALAS2	chrX	55074636	55076685	1.93	0.0022	212
PDE6C	chr10	95360634	95362189	1.93	0.0023	5146
CFTR	chr7	116905452	116907101	1.93	0.0023	1080
TASP1	chr20	13568250	13569999	1.93	0.0023	55617
TSGA13	chr7	130021046	130022400	1.93	0.0023	114960
CHRFAM7A	chr15	28474456	28475505	1.93	0.0023	89832
OR4C12	chr11	49959613	49961065	1.93	0.0023	283093
LOC402110	chr4	48996533	48997682	1.93	0.0023	402110
KRTAP12-2	chr21	44910272	44912221	1.93	0.0023	353323
MGC70870	chr17_random	115257	116412	1.93	0.0023	403340
AP2M1	chr3	185372827	185374176	1.93	0.0023	1173
ARNTL2	chr12	27375654	27377303	1.93	0.0023	56938
TUFT1	chr1	149776804	149777853	1.93	0.0023	7286
HSH2D	chr19	16103337	16104486	1.93	0.0023	84941
C12orf10	chr12	51978748	51980497	1.93	0.0023	60314
ChGn	chr8	19583374	19584525	1.93	0.0023	55790
C20orf59	chr20	61051803	61053352	1.93	0.0023	63910
GOLGA8A	chr15	32488480	32489829	1.93	0.0023	23015
FLJ45202	chr9	65234068	65235118	1.93	0.0023	401508
C1orf158	chr1	12727949	12729598	1.93	0.0023	93190
SPANXA1	chrX	140499502	140501151	1.92	0.0024	30014
LOC400968	chr15	19617021	19618082	1.92	0.0024	400968
EFCAB3	chr17	57809945	57810994	1.92	0.0024	146779
OR7C2	chr19	14913100	14914249	1.92	0.0024	26658
REP15	chr12	27739894	27740943	1.92	0.0024	387849
PAGE2	chrX	55130644	55131803	1.92	0.0024	203569

NUDT9	chr4	88560558	88562207	1.92	0.0024	53343
KCNAB1	chr3	157340944	157342398	1.92	0.0024	7881
C1orf55	chr1	224253355	224254904	1.92	0.0024	163859
DEFA1	chr8	6862526	6863575	1.92	0.0024	1667
SPANXD	chrX	140613364	140614713	1.92	0.0024	64648
TCL6	chr14	95198345	95199398	1.92	0.0024	27004
FLJ45831	chr17	14636725	14637776	1.92	0.0024	400576
ZNF485	chr10	43419180	43420329	1.92	0.0024	220992
OR2AG2	chr11	6747064	6748526	1.92	0.0024	338755
FLJ34931	chr2	29149631	29151480	1.92	0.0024	388939
DOCK1	chr10	128656454	128657806	1.92	0.0025	1793
C8orf16	chr8	11024655	11026104	1.92	0.0025	83735
MGAM	chr7	141340747	141341897	1.92	0.0025	8972
CPNE1	chr20	33705945	33706997	1.92	0.0025	8904
SPRYD3	chr12	51760605	51761860	1.92	0.0025	84926
KCNJ2	chr17	65674570	65675627	1.91	0.0025	3759
CYS1	chr2	10138213	10139470	1.91	0.0025	192668
UGT1A6	chr2	234263559	234264608	1.91	0.0025	54578
Rgr	chr22	22360547	22361896	1.91	0.0025	266747
CASP14	chr19	15023919	15024969	1.91	0.0025	23581
PSG7	chr19	48132430	48133881	1.91	0.0025	5676
KCTD14	chr11	77411934	77413296	1.91	0.0026	65987
DEFB118	chr20	29419088	29420237	1.91	0.0026	117285
MOBP	chr3	39483788	39485037	1.91	0.0026	4336
NDN	chr15	21483343	21485092	1.91	0.0026	4692
SLC15A2	chr3	123095176	123096233	1.91	0.0026	6565
KRTAP10-8	chr21	44855423	44856472	1.91	0.0026	386681
CXorf23	chrX	19893845	19894901	1.91	0.0026	256643
ZNF679	chr7	63324086	63325137	1.91	0.0026	168417
ENPEP	chr4	111616573	111617722	1.90	0.0026	2028
DPP6	chr7	153212751	153214303	1.90	0.0026	1804
ECM1	chr1	148744506	148745755	1.90	0.0026	1893
C3orf37	chr3	130478373	130479422	1.90	0.0027	56941
ATP1A3	chr19	47191422	47192471	1.90	0.0027	478
TIE1	chr1	43536550	43537709	1.90	0.0027	7075
OR4X1	chr11	48241088	48242637	1.90	0.0027	390113
TEX9	chr15	54444845	54445900	1.90	0.0027	374618
PPAPDC1A	chr10	122204079	122205241	1.90	0.0027	196051
PYHIN1	chr1	157165373	157166522	1.90	0.0027	149628
NAT8	chr2	73723235	73724688	1.90	0.0027	9027
PTPRZ1	chr7	121297942	121298993	1.90	0.0027	5803
GPR89A	chr1	145864437	145865587	1.90	0.0027	51463
C14orf32	chr14	54585553	54586802	1.90	0.0027	93487
IFNA21	chr9	21157725	21159187	1.90	0.0027	3452
OTOA	chr16	21623684	21624733	1.89	0.0028	146183
RP11-145H9.1	chr6	2697753	2698813	1.89	0.0028	340156
N/A	chr3	110539283	110540941	1.89	0.0028	

LOC220594	chr17	18364745	18367504	1.89	0.0028	220594
C21orf33	chr21	44376323	44377479	1.89	0.0028	8209
CML2	chr2	73782875	73784524	1.89	0.0028	51471
CBWD1	chr9	168032	169081	1.89	0.0028	55871
KRTAP19-5	chr21	30795379	30796728	1.89	0.0028	337972
PCBP3	chr21	46091602	46093166	1.89	0.0028	54039
WFDC3	chr20	43853282	43854431	1.89	0.0028	140686
CXCL11	chr4	77176057	77177113	1.89	0.0028	6373
FLJ42291	chr7	152743281	152744630	1.89	0.0029	346547
WHSC1	chr4	1871950	1873108	1.89	0.0029	7468
SPRYD5	chr11	55407731	55409591	1.89	0.0029	84767
OR5B21	chr11	58033454	58034603	1.89	0.0029	219968
C21orf100	chr21	28832712	28834261	1.89	0.0029	118421
ZFP106	chr15	40537119	40538368	1.88	0.0029	64397
TCEAL3	chrX	102747789	102748845	1.88	0.0029	85012
CLCN5	chrX	49719395	49720746	1.88	0.0029	1184
CHIA	chr1	111634306	111635555	1.88	0.0029	27159
N/A	chr22	40270310	40271359	1.88	0.0029	
AMY1A	chr1	104093363	104094820	1.88	0.0029	276
XAGE3	chrX	52912057	52913313	1.88	0.0030	170626
KCNAB1	chr3	157319541	157320790	1.88	0.0030	7881
ZNF642	chr1	40715788	40716843	1.88	0.0030	339559
CHRD1	chrX	109926949	109928305	1.88	0.0030	91851
FLJ12331	chr16	67624989	67626338	1.88	0.0030	80052
KRTAP12-1	chr21	44925706	44927256	1.88	0.0030	353332
KGFLP1	chr9	42010877	42012026	1.88	0.0030	387628
FLJ20160	chr2	191008864	191009916	1.88	0.0030	54842
IL1F6	chr2	113479719	113480868	1.88	0.0030	27179
WFDC9	chr20	43692321	43693370	1.88	0.0030	259240
KRTAP10-3	chr21	44803571	44804720	1.87	0.0031	386682
PCDHGB7	chr5	140778020	140779172	1.87	0.0031	56099
CNGA3	chr2	98352231	98353789	1.87	0.0031	1261
ALS2CR11	chr2	202193643	202194700	1.87	0.0031	151254
OR3A1	chr17	3141726	3142775	1.87	0.0031	4994
MFSD7	chr4	673680	675231	1.87	0.0031	84179
BIRC1	chr5	70355279	70356328	1.87	0.0031	4671
ECHS1	chr10	135037499	135038548	1.87	0.0031	1892
TUBB4Q	chr4	191143220	191144882	1.87	0.0031	56604
FKSG30	chr2	132099963	132101112	1.87	0.0031	440915
CCDC37	chr3	127594071	127595720	1.87	0.0031	348807
DNAI1	chr9	34448810	34449860	1.87	0.0031	27019
INE1	chrX	46947888	46948937	1.87	0.0031	8552
H2AFB2	chrX	154262029	154263082	1.87	0.0031	474381
FLJ35220	chr17	76001461	76002510	1.87	0.0031	284131
EFCAB1	chr8	49811944	49812993	1.87	0.0031	79645
SELV	chr19	44696230	44697279	1.87	0.0031	348303
FLJ10847	chr17	19375158	19376215	1.87	0.0031	55244

MYADM	chr19	59060222	59061271	1.87	0.0032	91663
LOC643367	chr5	69009942	69011291	1.87	0.0032	643367
ASB12	chrX	63361328	63362377	1.87	0.0032	142689
HAX1	chr1	152509468	152510517	1.87	0.0032	10456
MBP	chr18	72975262	72976319	1.87	0.0032	4155
ANXA8	chr10	47214967	47216316	1.86	0.0032	244
OR52W1	chr11	6174729	6175884	1.86	0.0032	120787
LOC440157	chr14	18753981	18755030	1.86	0.0032	440157
PLIN	chr15	88024995	88026253	1.86	0.0032	5346
TXNRD2	chr22	18305103	18306456	1.86	0.0032	10587
OR5D16	chr11	55360203	55361258	1.86	0.0033	390144
OAZ3	chr1	150005464	150006613	1.86	0.0033	51686
IFNA5	chr9	21295555	21296607	1.86	0.0033	3442
CDRT15	chr17	14079975	14081324	1.86	0.0033	146822
SLC26A10	chr12	56298559	56300208	1.86	0.0033	65012
PRKACG	chr9	70820128	70821277	1.86	0.0033	5568
PHC3	chr3	171382310	171383663	1.86	0.0034	80012
FLJ40244	chr17	18484846	18485895	1.86	0.0034	254272
ERN1	chr17	59561908	59562959	1.86	0.0034	2081
LOC126248	chr19	38313574	38314923	1.86	0.0034	126248
TMCC1	chr3	130890772	130891828	1.85	0.0034	23023
SPAG11	chr8	7307802	7309160	1.85	0.0034	10407
ZDHHC11	chr5	905701	906750	1.85	0.0034	79844
LOC440888	chr2	91492189	91493838	1.85	0.0034	440888
SLC31A2	chr9	114951221	114952370	1.85	0.0034	1318
NXF2	chrX	101613388	101614440	1.85	0.0034	56001
RIBC1	chrX	53466763	53467814	1.85	0.0034	158787
HECA	chr6	139495441	139496790	1.85	0.0034	51696
GPR151	chr5	145874869	145875918	1.85	0.0034	134391
YBX1	chr1	42920613	42921662	1.85	0.0034	4904
LILRA4	chr19	59543445	59544694	1.85	0.0034	23547
KIR2DL5A	chr19_random	228379	229434	1.85	0.0035	57292
DTNA	chr18	30543933	30544982	1.85	0.0035	1837
GPR109B	chr12	121766697	121767746	1.85	0.0035	8843
NALP7	chr19	60150079	60151228	1.85	0.0035	199713
NAT10	chr11	34081424	34082573	1.85	0.0035	55226
RBP2	chr3	140677342	140678391	1.85	0.0035	5948
OR1N2	chr9	124352969	124354625	1.85	0.0035	138882
SLC4A1	chr17	39701993	39703043	1.85	0.0035	6521
MYT1	chr20	62265270	62266519	1.85	0.0035	4661
ROPN1	chr3	125192189	125193247	1.85	0.0035	54763
PLG	chr6	161040972	161042432	1.85	0.0035	5340
N/A	chr19	42357073	42358125	1.85	0.0035	
MGC70870	chr17_random	116757	117906	1.85	0.0035	403340
FLJ25084	chr2	70044401	70045550	1.85	0.0035	151516
FAM12A	chr14	20281238	20283401	1.85	0.0035	10876
FLJ38451	chr19	40142044	40143193	1.85	0.0035	126375

VPS41	chr7	38874473	38875527	1.85	0.0035	27072
P2RY6	chr11	72651817	72652866	1.85	0.0035	5031
GH2	chr17	59312255	59313604	1.85	0.0035	2689
LQK1	chr1	211095919	211097776	1.85	0.0035	642946
CXorf44	chrX	55205434	55206985	1.85	0.0035	90736
ADAM12	chr10	128068455	128069604	1.85	0.0035	8038
DCTN1	chr2	74456287	74457536	1.85	0.0035	1639
ITGA2B	chr17	39821399	39822648	1.85	0.0035	3674
OR4M1	chr14	19315621	19316676	1.85	0.0036	441670
ZXDA	chrX	57953092	57954351	1.84	0.0036	7789
MAPK10	chr4	87500967	87502127	1.84	0.0036	5602
GLIS3	chr9	4143283	4144844	1.84	0.0036	169792
RNF14	chr5	141324234	141325883	1.84	0.0036	9604
SLCO6A1	chr5	101862590	101863950	1.84	0.0036	133482
GNG2	chr14	51412259	51413508	1.84	0.0036	54331
ABCG8	chr2	43919967	43921016	1.84	0.0036	64241
CAPN3	chr15	40437889	40439244	1.84	0.0036	825
ZDHHC21	chr9	14684074	14685426	1.84	0.0036	340481
KIAA0125	chr14	105458956	105460005	1.84	0.0036	9834
RTP1	chr3	188395901	188396960	1.84	0.0037	132112
SUPT16H	chr14	20923602	20924651	1.84	0.0037	11198
ATP4A	chr19	40747000	40748149	1.84	0.0037	495
SLC16A7	chr12	58366692	58368241	1.84	0.0037	9194
LMO2	chr11	33871913	33872963	1.84	0.0037	4005
ANGPTL6	chr19	10075325	10076974	1.83	0.0037	83854
ZNF398	chr7	148473350	148474399	1.83	0.0037	57541
B3GALT3	chr3	162286344	162287493	1.83	0.0038	8706
LOC349196	chr8	7106007	7107059	1.83	0.0038	349196
ADAM30	chr1	120240736	120242386	1.83	0.0038	11085
H2AFB3	chrX	154343062	154344611	1.83	0.0038	83740
CHST8	chr19	38865273	38866322	1.83	0.0038	64377
NME6	chr3	48318452	48319503	1.83	0.0038	10201
RTDR1	chr22	21813241	21814290	1.83	0.0038	27156
TCEAL5	chrX	102419756	102420810	1.83	0.0038	340543
OR2T34	chr1	246805281	246806340	1.83	0.0039	127068
SLC4A5	chr2	74423570	74424620	1.83	0.0039	57835
KIAA1920	chr15	82757603	82758652	1.83	0.0039	114817
BZRAP1	chr17	53760477	53761626	1.83	0.0039	9256
KRTAP6-3	chr21	30886455	30887618	1.83	0.0039	337968
EREG	chr4	75448423	75450072	1.83	0.0039	2069
LMLN	chr3	199172367	199173925	1.83	0.0039	89782
SYNE2	chr14	63751528	63752777	1.83	0.0039	23224
C4BPA	chr1	205341529	205342584	1.83	0.0039	722
PLGLB1	chr2	87828420	87829476	1.83	0.0039	5343
ITGAE	chr17	3659578	3660633	1.83	0.0039	3682
DHX9	chr1	181114442	181116402	1.82	0.0039	1660
ZNF609	chr15	62578571	62579620	1.82	0.0040	23060

FRG2	chr4	191184906	191185955	1.82	0.0040	448831
CLDN14	chr21	36774258	36775717	1.82	0.0040	23562
ZNF447	chr19	63301489	63302538	1.82	0.0040	65982
GAB2	chr11	77730903	77732252	1.82	0.0040	9846
WIG1	chr3	180272978	180274236	1.82	0.0040	64393
ACOT2	chr14	73103731	73104780	1.82	0.0040	10965
OR51E1	chr11	4627435	4628591	1.82	0.0040	143503
RASL12	chr15	63148841	63149890	1.82	0.0040	51285
POTE14	chr14	18620764	18621813	1.82	0.0040	404785
DEFA1	chr8	6825912	6826961	1.82	0.0041	1667
CNGA4	chr11	6214209	6215458	1.82	0.0041	1262
DLG3	chrX	69579343	69580392	1.82	0.0041	1741
FCRL3	chr1	155936471	155937820	1.82	0.0041	115352
RAB6IP2	chr12	1006675	1008032	1.82	0.0041	23085
GATA2	chr3	129695618	129696667	1.82	0.0041	2624
OR2AT4	chr11	74478906	74479955	1.82	0.0041	341152
CABIN1	chr22	22735664	22736718	1.82	0.0041	23523
FGR	chr1	27823060	27824116	1.82	0.0041	2268
LILRA3	chr19	59496860	59497914	1.82	0.0041	11026
KIAA1727	chr4	154083384	154084433	1.82	0.0041	85462
PPP3R2	chr9	103397821	103398878	1.82	0.0041	5535
GSDMB	chr17	35328429	35329878	1.82	0.0041	55876
WNT5B	chr12	1595982	1597039	1.81	0.0041	81029
CST11	chr20	23380482	23381531	1.81	0.0041	140880
LRRC37A	chr17	41726891	41728050	1.81	0.0041	9884
BDH1	chr3	198784791	198785850	1.81	0.0041	622
DUX4	chr4	191236762	191237811	1.81	0.0042	22947
PCDHGC5	chr5	140848891	140849940	1.81	0.0042	56097
SCT	chr11	617075	618524	1.81	0.0042	6343
GSDML	chr17	35326519	35327569	1.81	0.0042	55876
ZNF568	chr19	42099084	42100138	1.81	0.0042	374900
SSR2	chr1	154257851	154259500	1.81	0.0042	6746
LCE1A	chr1	151065672	151066728	1.81	0.0042	353131
OR6C65	chr12	54077879	54078936	1.81	0.0042	403282
OR2M5	chr1	246374072	246375235	1.81	0.0042	127059
CRMP1	chr4	5945886	5947135	1.81	0.0042	1400
FLJ13231	chr5	37248712	37250266	1.81	0.0042	65250
GPR52	chr1	172683745	172684803	1.81	0.0042	9293
PMVK	chr1	153176791	153177840	1.81	0.0042	10654
VSIG9	chr3	115492964	115494013	1.81	0.0043	201633
DEFB106A	chr8	7330152	7331209	1.81	0.0043	245909
C11orf44	chr11	130045360	130046411	1.81	0.0043	283171
LOC644011	chr10	48571500	48572556	1.81	0.0043	644011
FETUB	chr3	187839142	187840192	1.81	0.0043	26998
ECE2	chr3	185474987	185476039	1.81	0.0043	9718
C11orf42	chr11	6180773	6181922	1.80	0.0043	160298
GMEB2	chr20	61722273	61723325	1.80	0.0044	26205



RetSat	chr2	85436546	85437595	1.80	0.0044	54884
BNIP1	chr1	149274315	149275368	1.80	0.0044	149428
KIR2DS1	chr19_random	256087	257341	1.80	0.0044	3806
FLJ42258	chr11	69182679	69184028	1.80	0.0044	440049
DNAJC19	chr3	182189624	182191375	1.80	0.0044	131118
KCNA10	chr1	110862320	110863469	1.80	0.0044	3744
LOC96610	chr22	20986188	20987243	1.80	0.0044	96610
CUEDC1	chr17	53335849	53336898	1.80	0.0044	404093
KIR2DS3	chr19_random	239623	240676	1.80	0.0044	3808
LRRC32	chr11	76060043	76061092	1.80	0.0044	2615
CTGLF1	chr10	45663227	45664576	1.80	0.0044	119016
OR6K2	chr1	156936066	156937115	1.80	0.0044	81448
DMRTC1	chrX	72080743	72081792	1.80	0.0044	63947
LOC196913	chr14	49629111	49630469	1.80	0.0044	196913
OR5P3	chr11	7803095	7804550	1.80	0.0044	120066
ELA3A	chr1	22198435	22199486	1.80	0.0045	10136
LOC285527	chr4	48351716	48352873	1.80	0.0045	285527
SLC9A8	chr20	47861256	47862308	1.80	0.0045	23315
TNFRSF13B	chr17	16816827	16817876	1.80	0.0045	23495
PTPRT	chr20	41252889	41254538	1.80	0.0045	11122
PI3	chr20	43235411	43236462	1.80	0.0045	5266
OVOL1	chr11	65308704	65309853	1.80	0.0045	5017
OR1B1	chr9	124431335	124432386	1.80	0.0045	347169
FLJ10324	chr7	4890843	4892192	1.80	0.0045	55698
OR2M3	chr1	246432692	246433741	1.80	0.0045	127062
ZNF577	chr19	57082009	57083063	1.80	0.0045	84765
GZMH	chr14	24147804	24148857	1.80	0.0046	2999
SYT13	chr11	45265183	45266332	1.80	0.0046	57586
CABP5	chr19	53240438	53241590	1.79	0.0046	56344
SIRPG	chr20	1586802	1587951	1.79	0.0046	55423
PRH1	chr12	10928319	10929370	1.79	0.0046	5554
CARD6	chr5	40874842	40875903	1.79	0.0046	84674
AFF3	chr2	100089879	100091132	1.79	0.0046	3899
LOC51149	chr5	179219767	179220827	1.79	0.0046	51149
THEM5	chr1	150092597	150093648	1.79	0.0046	284486
HK1	chr10	70698864	70700313	1.79	0.0046	3098
MSRA	chr8	9946835	9947985	1.79	0.0046	4482
C17orf77	chr17	70090151	70091400	1.79	0.0046	146723
UNQ3033	chr19	59259846	59261095	1.79	0.0046	284415
HTR3E	chr3	185300560	185301609	1.79	0.0046	285242
PSCD1	chr17	74290971	74292431	1.79	0.0046	9267
CARD14	chr17	75764375	75765425	1.79	0.0046	79092
CES1	chr16	54425276	54426325	1.79	0.0047	1066
SPOCK2	chr10	73519690	73520739	1.79	0.0047	9806
C9orf24	chr9	34388649	34389698	1.79	0.0047	84688
PAGE2B	chrX	55116728	55117884	1.79	0.0047	389860
GRAP	chr17	18892061	18893111	1.79	0.0047	10750

CASC1	chr12	25238282	25239436	1.79	0.0047	55259
DPRX	chr19	58826521	58827570	1.79	0.0047	503834
FAM90A1	chr12	8272664	8274113	1.79	0.0047	55138
C9orf48	chr9	34252609	34253658	1.79	0.0047	347240
FLJ45139	chr21	39231323	39232784	1.79	0.0047	400867
LCN1	chr9	137551806	137553155	1.79	0.0047	3933
CD86	chr3	123279139	123280389	1.79	0.0047	942
SSX2	chrX	52753074	52754127	1.79	0.0047	6757
LOC286016	chr7	128483934	128484983	1.79	0.0047	286016
CBLN1	chr16	47883029	47884290	1.79	0.0047	869
FLJ36840	chr7_random	222017	223077	1.79	0.0047	645524
DNAH9	chr17	11724343	11725392	1.79	0.0047	1770
AGTR1	chr3	149929303	149930659	1.79	0.0047	185
FAM71B	chr5	156526856	156527910	1.79	0.0047	153745
OR10X1	chr1	156815313	156816362	1.79	0.0047	128367
LOC441426	chr9	43125007	43126069	1.79	0.0047	441426
KCNA6	chr12	4785902	4786959	1.79	0.0047	3742
OR52E5	chr11	5876582	5877738	1.79	0.0047	390082
FGD5	chr3	14834409	14835558	1.79	0.0047	152273
UROC1	chr3	127720484	127721933	1.79	0.0048	131669
LOC440295	chr15	80509942	80510991	1.79	0.0048	440295
USH2A	chr1	214663361	214664510	1.79	0.0048	7399
GNL3L	chrX	54570866	54572215	1.78	0.0048	54552
DYNLT1	chr6	158986331	158987480	1.78	0.0048	6993
FLJ46020	chr21	34242099	34243148	1.78	0.0048	400863
C14orf139	chr14	94947510	94948659	1.78	0.0048	79686
KIAA1026	chr1	15126182	15127731	1.78	0.0049	23254
C1QTNF3	chr5	34080674	34081732	1.78	0.0049	114899
HNF4A	chr20	42416284	42418033	1.78	0.0049	3172
LOC257358	chr5	169692067	169693116	1.78	0.0049	257358
MGC48595	chr14	73094604	73096060	1.78	0.0049	399671
LOC148696	chr1	206057546	206059145	1.78	0.0049	148696
FLJ45831	chr17	14638125	14639278	1.78	0.0049	400576
PKD2L1	chr10	102080733	102081787	1.78	0.0049	9033
KRTAP13-1	chr21	30689312	30690570	1.78	0.0049	140258
HSD3B1	chr1	119849873	119850922	1.78	0.0049	3283
LOC286526	chrX	102077755	102078804	1.78	0.0049	286526
KRTAP5-4	chr11	1598944	1599993	1.78	0.0049	387267
ASAP	chr4	156519091	156520148	1.78	0.0049	79884
FBXL12	chr19	9791631	9792680	1.78	0.0050	54850
DEFA1	chr8	6824312	6825361	1.78	0.0050	1667
MYO1D	chr17	28229616	28230674	1.78	0.0050	4642
HLA-G	chr6	29900996	29902145	1.78	0.0050	3135
SLC6A18	chr5	1277569	1278618	1.78	0.0050	348932
POMC	chr2	25245759	25246808	1.78	0.0050	5443
GPR21	chr9	124836568	124837623	1.78	0.0050	2844
ABCD2	chr12	38301059	38302119	1.78	0.0050	225

**Table S2. Gene set enrichment analysis for Notch3 CHIP targets in NOTCH-regulated transcriptome**

<b>Exp Condition</b>	<b>P-value (down-regulated)</b>	<b>P-value (up-regulated)</b>
OVCAR3 24 hr	0.185	<b>0.028</b>
OVCAR3 48 hr	<b>0.047</b>	0.399
MCF7 24 hr	0.784	0.666
MCF7 48 hr	0.656	0.110

**Table S3. Genes Identified by ChIP-on-chip and cDNA Microarray in OVCAR3**

SYMBOL	GENE ID	PEAK_SCORE	MRK-003/DMSO	# OF CSL MOTIF	# OF NEW MOTIF
DLGAP5	9787	3.55	0.51	6	2
KIAA1279	26128	2.66	0.64	7	5
FOXD4	2298	2.36	0.62	3	3
TTC5	91875	2.18	0.62	3	4
FOXD4L1	200350	2.15	0.66	4	4
EHF	26298	2.12	0.61	7	1
NCOA5	57727	2.07	0.61	3	0
NRAS	4893	2.05	0.65	3	2
ITPR2	3709	2.02	0.59	3	0
KCNAB1	7881	1.92	0.66	0	2
ZNF679	168417	1.91	0.61	5	1
FKSG30	440915	1.87	0.65	n/a	n/a
DTNA	1837	1.85	0.65	6	2
FAM104B	90736	1.85	0.57	n/a	n/a
RNF14	9604	1.84	0.61	6	5
GNG2	54331	1.84	0.61	4	2
PMVK	10654	1.81	0.62	3	0
DNAJC19	131118	1.80	0.59	1	3
PRH1	5554	1.79	0.65	3	3
IFP38	83880	2.59	1.53	n/a	n/a
NBPF10	440673	2.53	1.70	2	3
NBPF20	400818	2.45	1.58	5	2
SCYL1	57410	2.27	1.64	3	0
PITPNM1	9600	2.10	1.73	7	2
LOC44034	440348	2.03	1.59	n/a	n/a
GOLT1A	127845	2.01	1.67	6	3
SEMA4G	57715	1.96	1.59	2	3
SELV	348303	1.87	1.51	n/a	n/a
P2RY6	5031	1.85	1.63	4	1
ACOT2	10965	1.82	1.53	2	1
GSDMB	55876	1.82	1.59	n/a	n/a
SPOCK2	9806	1.79	2.78	5	2
KIAA1026	23254	1.78	1.52	1	1

**Table S4. PCR primers for this study**

	<b>Gene Symbol</b>	<b>Forward Primer</b>	<b>Reverse Primer</b>
Quantitative RT-PCR	NOTCH3	GTGTGTGTC AATGGCTGGAC	GTGACACAGGAGGCCAGTCT
	DLGAP5	GATCTGGATGGATTTTGGGA	TTATTGACTTGCCACCCAGA
	TTC5	TGGAGTGGCCGGGAGATGAT	GCTGATCCACGAGTTCCTGCAATT
	EHF	TATTGGATTTCCACCCAGA	CTGGTGAAGGAGGTTGTTGC
	KIAA1279	TCTTCAGGAAGAAAACGCTCA	TGAAACTGCACAGGCTTACCT
	APP	TGAATAATTGGGTTTGT TTTTGT	TACAACCTACCTTCTCTCCCTT
	HEY1	TGGATCACCTGAAAATGCTG	CGAAATCCCAAACCTCCGATA
	IGFBP3	CTCTGCGTCAACGCTAGTGC	CGGTCTTCTCCGACTCAC
	PARM1	GGCACCAAATACCAGGCTAC	CAAAGGAGCTGATGTAGGCA
	CCNA1	GCTAGGGCTGCTAACTGCAA	GGAAGGCATTTTCTGATCCA
	HES1	CGGACATTCTGGAATGACA	GTGCGCACCTCGGTATTAAC
ChIP-qPCR	DLGAP5 (-1862 region)	AGCATGTGAAACAAGTGAACT	TCTAAC TTTGTAAGGAATTGCCAAGC
	DLGAP5 (-2354 region)	GGGTACAGTGGTGCGATCAT	CGCACATCTCTAGTCCCACT
	DLGAP5 (+496 region)	GGGGCGTAATTGACCTTTG	CCTCCAGCTTGAAAGTCCAG
	PIN1	AGTTGCACCCTTTGCTGT CAGTGT	GGAGGTATTTGGGGACCCAGAGTT
	CASC2	GCCTCTTCACTGACCGAAAGGAAA	TGGGTGGGGATGTCATTTTCA
	L3MBTL2	CATCCCAGCAAAAGGGCACCTTAA	GTTCCAGACTCCAGGAATAACCTCG
	TMF1	ACGTGCTAAAAGCTTGACCTTGC	GGCTAAGAGAAGTGTGAGGCCCAAT
	KIAA1279	CCGGGAGGGTTATATTGGTT	TGGAATTTCTCGCAGACCTC
	YWHAQ	GGCTGAGGGGAGTTGGTAAC	CTAGGAGGGTGGGTCGGTA
	UVRAG	TTCTTTTCAATCCCTGCACGC	TCGCTTGTCTGCCTTGGCAG
	SLC7A4	TTCTGGTGGTTTGTCTTCACTGC	GAGTGAGACAGCTACACA
	TTC5	GCTGCACCCTCGAGGGTTGTTA	CCGTGAATTCCTCGGCACACA