
Supplementary information

Normal breast tissues harbour rare populations of aneuploid epithelial cells

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Normal Breast Tissues Harbor Rare Populations of Aneuploid Epithelial Cells

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Supplementary Information

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Supplementary Table 1 - Clinical Metadata of Normal Breast Samples

Patient ID	Tissue ID	Age	Ethnicity	Menopause	BMI	Parity	Hyper-plasia	Metapla-sia
P01	P01L	51	Caucasian	On	30.34	P=0	N.O.	Yes
P02	P02L	34	Caucasian	Pre	42.51	P>0	N.O.	N.O.
P03	P03L	49	African-American	Pre	29.79	P>0	N.O.	Yes
P04	P04R	29	African-American	Pre	30.61	Unk	N.O.	N.O.
P05	P05L	45	African-American	Pre	39.89	P>0	N.O.	N.O.
P06	P06R	51	African-American	Pre	24.93	Unk	N.O.	N.O.
P07	P07L	54	Caucasian	Post	27.64	P>0	N.O.	N.O.
P08	P08R	63	Hispanic	Post	31.5	P=0	N.O.	N.O.
P09	P09L	52	Hispanic	Unk	39	Unk	Yes	Yes
P10	P10L	50	African-American	Unk	42.16	Unk	Yes	N.O.
P11	P11R	46	Caucasian	Post	21.87	P>0	Yes	N.O.
P12	P12L	41	African-American	Pre	44.1	P>0	Yes	N.O.
P13	P13L	50	African-American	Post	33.23	P>0	N.O.	N.O.
P14	P14L	42	Caucasian	Pre	37.01	P>0	N.O.	Yes
P15	P15L	24	Caucasian	Pre	19.44	P=0	Yes	N.O.
P16	P16L	25	African-American	Pre	35.94	P>0	N.O.	N.O.
P17	P17L	34	Hispanic	Pre	30.61	P>0	Yes	Yes
P18	P18R	35	African-American	Pre	45.46	P>0	N.O.	N.O.
P19	P19R	58	Caucasian	Post	26.48	P=0	N.O.	Yes
P20	P20L	45	African-American	Pre	37.17	P>0	N.O.	N.O.
P21	P21R	44	African-American	Pre	38.78	P>0	N.O.	N.O.
P22	P22L	43	African-American	Pre	42.8	P>0	N.O.	N.O.
P23	P23L	31	African-American	Pre	47.44	P>0	N.O.	N.O.
P24	P24R	47	Hispanic	Pre	35.48	P>0	N.O.	N.O.
P25	P25R	45	Caucasian	Pre	25.14	P>0	N.O.	N.O.
P26	P26R	44	African-American	Pre	39.72	P>0	N.O.	N.O.
P27	P27L	41	African-American	Pre	26.63	P>0	N.O.	N.O.
P28	P28R	50	Caucasian	Post	32.95	P=0	N.O.	N.O.
P29	P29L	56	Caucasian	Post	26.73	P=0	N.O.	N.O.
P30	P30L	38	Caucasian	Pre	34	P>0	N.O.	N.O.
P31	P31L	39	African-American	Pre	34.16	P>0	N.O.	N.O.
P32	P32R	27	Hispanic	Pre	30.9	P>0	N.O.	N.O.
P33	P33L	38	African-American	Pre	43.95	P>0	N.O.	Yes
P34	P34L	18	African-American	Pre	34	P=0	N.O.	N.O.
P35	P35L	31	African-American	Pre	31.6	Unk	N.O.	N.O.
P36	P36L	41	Caucasian	Pre	21.32	Unk	Yes	Yes
P37	P37R	46	African-American	Pre	41.46	P>0	N.O.	N.O.
P38	P38L	36	Asian	Pre	16.64	P>0	Yes	Yes
P39	P39R	32	African-American	Pre	39.31	P>0	N.O.	N.O.
P40	P40R	40	African-American	Pre	32.28	P>0	N.O.	N.O.

P41	P41R	62	Caucasian	Post	29.95	P>0	N.O.	Yes
P42	P42L	37	African-American	Pre	42.25	P>0	N.O.	N.O.
P43	P43L	21	African-American	Pre	31.55	P=0	N.O.	N.O.
P44	P44R	49	African-American	Post	32.8	P>0	N.O.	N.O.
P45	P45L	53	African-American	Post	31.82	P>0	N.O.	N.O.
P46	P46L	41	African-American	Pre	32.98	P>0	N.O.	Yes
P47	P47L	41	African-American	Pre	21.13	P>0	Yes	Yes
P48	P48R	46	AA-Hispanic	Pre	24.9	P>0	N.O.	Yes
P49	P49R	43	African-American	Pre	30.4	P>0	N.O.	N.O.

Supplementary Table 1 – Clinical Metadata of Normal Breast Tissue Samples

This table lists the assay performed and the clinical metadata for patients included in this study. The columns list from left to right the patient identifier (Patient ID), the tissue identifier (Tissue ID), the age of patient (Age), the ethnicity of the women self-identifies as (Ethnicity), the menopausal status (Menopause, before menopause, Pre; on menopause, On; after menopause, Post; unknown, Unk), the Body Mass Index (BMI), the number of times a woman has given birth to infants (Parity status, never gave birth, P0; gave birth, P>0; unknown, Unk), if hyperplasia was observed in the tissue (Hyperplasia, Observed, Yes; Not observed, N.O), if metaplasia was observed in the tissue (Metaplasia, Observed, Yes; Not observed, N.O).

Supplementary Table 2 – Single Cell DNA Sequencing Quality Control Metrics

Patient ID	Mean Total Reads	Mean Reads Retained	Coverage Depth (X)	Duplication Rate	Paired End	Cells Sequenced	Cells Pass QC	Cells Pass QC %	Diploid Cells	Aneuploid Cells
P01	768469	644296	0.0101	16.16%	T	2043	960	46.99%	897	63
P02	842300	559508	0.0088	33.57%	T	2109	1804	85.54%	1771	33
P03	218869	186044	0.0029	15.00%	T	2216	1888	85.20%	1776	112
P04	153614	125881	0.0020	18.05%	F	2336	2066	88.44%	2044	22
P05	571333	427853	0.0067	25.11%	T	2187	1770	80.93%	1698	72
P06	150544	118833	0.0019	21.06%	F	2125	1695	79.76%	1579	116
P07	139021	117896	0.0019	15.19%	F	2448	1520	62.09%	1303	217
P08	173291	138801	0.0022	19.90%	F	1527	1239	81.14%	980	259
P09	795672	667154	0.0105	16.15%	T	2094	1927	92.02%	1868	59
P10	593920	422334	0.0066	28.89%	T	2444	2026	82.90%	1967	59
P11	658481	565099	0.0089	14.18%	T	2362	2023	85.65%	1998	25
P12	192597	156167	0.0025	18.92%	F	2094	1796	85.77%	1766	30
P13	737155	618270	0.0097	16.13%	T	2334	1958	83.89%	1924	34
P14	201890	163889	0.0026	18.82%	F	2093	1953	93.31%	1854	99
P15	652636	545734	0.0086	16.38%	T	1632	1361	83.39%	1342	19
P16	170993	134024	0.0021	21.62%	F	2227	1349	60.57%	1323	26
P17	193814	161093	0.0025	16.88%	T	2292	2045	89.22%	1917	128
P18	1176951	1027169	0.0162	12.73%	T	1558	1356	87.03%	1342	14
P19	631757	528398	0.0083	16.36%	T	2603	2131	81.87%	2063	68
P20	605266	508297	0.0080	16.02%	T	2783	2166	77.83%	2061	105
P21	963811	771617	0.0121	19.94%	T	1966	1649	83.88%	1556	93
P22	833449	693120	0.0109	16.84%	T	2032	1814	89.27%	1781	33
P23	261025	215769	0.0034	17.34%	T	2100	1873	89.19%	1757	116
P24	509210	395705	0.0062	22.29%	F	2492	1802	72.31%	1701	101
P25	613111	523581	0.0082	14.60%	T	2563	2261	88.22%	2172	89
P26	630810	441092	0.0069	30.08%	T	2105	1625	77.20%	1588	37
P27	265993	215038	0.0034	19.16%	T	1777	1466	82.50%	1405	61
P28	615847	509782	0.0080	17.22%	T	2618	2177	83.16%	2106	71
P29	130870	122969	0.0019	6.04%	F	2559	2199	85.93%	2125	74
P30	686865	582280	0.0092	15.23%	T	2169	1817	83.77%	1772	45
P31	617122	528207	0.0083	14.41%	T	2370	2133	90.00%	2110	23
P41	321725	260259	0.0041	19.11%	F	2129	1328	62.38%	1307	21
P37	226767	177129	0.0028	21.89%	T	2269	1464	64.52%	1402	62
P34	279391	201040	0.0032	28.04%	F	2197	1852	84.30%	1847	5
P46	278386	203874	0.0032	26.77%	F	1841	978	53.12%	921	57
P33	443693	376767	0.0059	15.08%	T	1790	1278	71.40%	1189	89
P35	232264	191149	0.0030	17.70%	T	2482	1854	74.70%	1818	36

P36	218623	134868	0.0021	38.31%	F	2121	1568	73.93%	1440	128
P38	192310	164292	0.0026	14.57%	T	1557	1218	78.23%	1190	28
P32	242590	201057	0.0032	17.12%	T	2022	1254	62.02%	1223	31
P39	146508	119376	0.0019	18.52%	F	2110	1931	91.52%	1884	47
P40	147127	122404	0.0019	16.80%	F	2316	1944	83.94%	1789	155
P42	275316	198738	0.0031	27.81%	F	2169	1375	63.39%	1291	84
P43	202843	158815	0.0025	21.70%	F	2412	2008	83.25%	1987	21
P44	244737	194637	0.0031	20.47%	F	2319	1904	82.10%	1849	55
P45	278878	200025	0.0031	28.28%	F	2081	1002	48.15%	976	26
P47	187489	164129	0.0026	12.46%	T	2419	1777	73.46%	1692	85
P48	166472	151350	0.0024	9.08%	T	2077	1453	69.96%	1420	33
P49	256810	219528	0.0035	14.52%	T	1889	1170	61.94%	1096	74

Supplementary Table 2 – Single Cell DNA Sequencing Quality Control Metrics

This table lists the quality control metrics of the single cell DNA sequencing data for the breast tissue samples included in this study. The columns lists from left to right the patient identifier (Patient ID), mean total reads per cell, mean reads retained after filtering duplicates (Mean Reads Retained), mean coverage depth per cell (Coverage Depth (X)) median bin count across cells (Median Bin Count), PCR duplicate read rate (Duplication Rate), if scDNA library sequenced using paired-end sequencing (Paired End, paired-end, T; single-end, F), the number of cells sequenced (Cell Sequenced), the number of cells retained after quality control (Cells Pass QC), the proportion of cells retained after quality control (Cell Pass QC %), the number of detected diploid cells (Diploid Cells), the number of detected aneuploid cells (Aneuploid Cells).

Patient ID	Mean Total Reads	Mean Reads Kept	Median Bin Count	Duplication Rate	Overall Depth (X)	Coverage
P08	1137818	876473	66	22.97%	18.96	91.43%
P17	2029684	898327	69	55.74%	66.8	91.65%
P20	908609	765387	57	15.76%	28.01	91.60%
P21	963811	771617	58	19.94%	20.32	91.59%
P23	1350106	1061169	81	21.40%	37.71	91.65%

Supplementary Table 3 – Single Cell DNA High Depth Sequencing Metrics

This table lists the sequencing data quality metrics for the high-depth single cell DNA sequencing data from 5 women. The columns list from left to right the patient identifier (Patient ID), mean total reads per cell, mean reads retained after filtering duplicates (Mean Reads Retained), median bin count across cells (Median Bin Count), PCR duplicate read rate (Duplication Rate), overall depth and coverage.

Patient ID	Cell Sequenced	ATAC Quality Control					DNA Quality Control					
		Mean TSS	Mean Fragment	Mean Total Reads	Duplication Rate	Cell Pass QC	Mean Total Reads	Mean Reads Kept	Median Bin Count	Duplication Rate	Cell ATAC-DNA	Aneuploid Cell
P03	2216	15.25	12342	33676	50.02%	2082	218869	186044	14	15%	2082	100
P06	851	12.24	11816	51748	48.69%	560	694513	459108	35	33.89%	560	27
P07	984	14.16	11163	65054	51.17%	721	519637	296486	22	42.94%	719	32
P08	1527	12.74	9647	35023	63.32%	1375	173291	138801	10	19.90%	1375	233
P10	2292	18.63	4297	22708	75.45%	1997	210664	179666	13	14.71%	1997	17
P14	2093	19.58	7563	30843	72.55%	1984	201890	163889	12	18.82%	1984	81
P17	2292	18.19	6388	21682	66.33%	2162	193814	161093	12	16.88%	2162	116
P20	2783	8.79	7358	51228	81.85%	2448	70993	44657	3	37.10%	1331	14
P21	2031	14.46	11987	26742	48.04%	1222	259608	194700	15	25%	1065	35
P22	2167	12.7	14639	31685	37.60%	2050	242099	189498	14	21.73%	2050	6
P24	2007	12.94	8843	26817	61.37%	1910	268442	208243	16	22.43%	1910	50
P32	2022	17.33	5096	29461	77.20%	1495	242590	201057	15	17.12%	1495	30
P37	2269	18.75	9881	47125	72.82%	1848	226767	177129	13	21.89%	1848	54
P39	2110	16.71	3543	11493	62.12%	1530	146508	119376	9	18.52%	1530	26
P40	2316	14.45	13243	35365	47.66%	2137	147127	122404	9	16.80%	2137	131
P42	2169	14.49	10279	50354	69.19%	1646	275316	198738	15	27.81%	1644	72
P44	2319	16.92	6130	16763	54.73%	1878	244737	194637	15	20.47%	1878	46
P46	1841	17.98	9114	37528	69.06%	1615	278386	203874	15	26.77%	1613	48
P47	2419	20.27	5770	20806	65.04%	1796	187489	164129	12	12.46%	1796	59

Supplementary Table 4 - Single Cell ATAC-DNA co-assay Quality Control Metrics

This table lists the quality control metrics of the single cell DNA sequencing data from 19 samples. The columns list from left to right indicates the patient identifier (Patient ID), the number of cells sequenced (Cell Sequenced), the ATAC quality control: mean Transcription Start Site (TSS) Enrichment Score (Mean TSS), mean unique fragments per cell (Mean Fragment), mean total reads sequenced per cell (Mean Total Reads), duplication rate = $\frac{\text{total duplicated reads}}{\text{total sequenced reads}}$, cells passed quality control standers (Cell Pass ATAC QC); the DNA quality control:

mean total reads = $\frac{\text{total sequenced reads}}{\text{the number of cell sequenced}}$, mean reads kept = $\frac{\text{kept reads}}{\text{the number of cell sequenced}}$, median of bin count

across cells (Median Bin Count), duplication rate = $\frac{\text{total duplicated reads}}{\text{total sequenced reads}}$, cells detected in both scATAC-seq data and scDNA-seq data, the detected aneuploid cell (Aneuploid Cell).

Supplementary Table 5 – Comparison of ATAC signals in the genomic regions with CNA event between aneuploid cells and diploid cells

CNA event	Cell with Event	Diploid cell	Cell Type	Gene	Log2FC	P value	FDR
chr1q_gain	318	11742	LumSec	PLEKHA6	0.927	1.17E-23	1.24E-20
chr1q_gain	318	11742	LumSec	NBPF10	0.534	7.55E-23	2.52E-20
chr1q_gain	318	11742	LumSec	NBPF20	0.534	7.59E-23	2.52E-20
chr1q_gain	318	11742	LumSec	PGBD5	0.912	9.42E-23	2.52E-20
chr1q_gain	318	11742	LumSec	GBAP1	1.187	3.69E-22	5.91E-20
chr1q_gain	318	11742	LumSec	LMNA	0.579	3.71E-22	5.91E-20
chr1q_gain	318	11742	LumSec	MCL1	0.72	3.87E-22	5.91E-20
chr1q_gain	318	11742	LumSec	IL6R	0.698	1.49E-21	1.99E-19
chr1q_gain	318	11742	LumSec	DCST1	0.92	1.69E-21	2.01E-19
chr1q_gain	318	11742	LumSec	CAPN9	0.944	8.74E-21	9.34E-19
chr1q_gain	318	11742	LumSec	RCSD1	0.845	4.89E-20	4.74E-18
chr1q_gain	318	11742	LumSec	MEF2D	0.624	1.10E-19	9.80E-18
chr1q_gain	318	11742	LumSec	DCST1-AS1	0.833	1.29E-19	1.06E-17
chr1q_gain	318	11742	LumSec	S100A13	0.909	5.37E-19	4.10E-17
chr1q_gain	318	11742	LumSec	GPR37L1	0.63	1.20E-18	8.52E-17
chr1q_gain	318	11742	LumSec	CHTOP	0.835	3.99E-18	2.66E-16
chr1q_gain	318	11742	LumSec	PPP1R12B	0.789	4.78E-18	3.00E-16
chr1q_gain	318	11742	LumSec	MDM4	0.764	6.47E-18	3.84E-16
chr1q_gain	318	11742	LumSec	PBX1	0.6	7.25E-18	4.07E-16
chr1q_gain	318	11742	LumSec	IRF2BP2	0.64	8.14E-18	4.35E-16
chr1q_gain	318	11742	LumSec	TTC13	0.894	1.62E-17	8.23E-16
chr1q_gain	318	11742	LumSec	ADAM15	0.804	2.24E-17	1.09E-15
chr1q_gain	318	11742	LumSec	UCK2	0.757	2.51E-17	1.17E-15
chr1q_gain	318	11742	LumSec	LAMB3	0.853	4.40E-17	1.96E-15
chr1q_gain	318	11742	LumSec	LINC01354	0.729	5.54E-17	2.37E-15
chr1q_gain	318	11742	LumSec	SRP9	0.732	8.15E-17	3.35E-15
chr1q_gain	318	11742	LumSec	LINC01132	0.7	1.75E-16	6.93E-15
chr1q_gain	318	11742	LumSec	C1orf198	0.774	1.93E-16	7.37E-15
chr1q_gain	318	11742	LumSec	TMEM183A	0.958	4.20E-16	1.55E-14
chr1q_gain	318	11742	LumSec	DEGS1	0.703	5.50E-16	1.96E-14
chr1q_gain	318	11742	LumSec	TOMM20	0.886	6.49E-16	2.24E-14
chr1q_gain	318	11742	LumSec	USP21	0.803	6.98E-16	2.26E-14
chr1q_gain	318	11742	LumSec	IER5	0.594	7.18E-16	2.26E-14
chr1q_gain	318	11742	LumSec	MUC1	0.75	7.21E-16	2.26E-14
chr1q_gain	318	11742	LumSec	HHAT	0.647	8.20E-16	2.50E-14
chr1q_gain	318	11742	LumSec	SLC25A44	0.896	8.83E-16	2.62E-14
chr1q_gain	318	11742	LumSec	PFKFB2	0.758	1.08E-15	3.12E-14
chr1q_gain	318	11742	LumSec	TLR5	0.842	1.15E-15	3.23E-14
chr1q_gain	318	11742	LumSec	C1orf116	0.778	1.45E-15	3.97E-14
chr1q_gain	318	11742	LumSec	MIR4260	0.869	1.95E-15	5.21E-14
chr1q_gain	318	11742	LumSec	BTG2	0.764	2.93E-15	7.62E-14
chr1q_gain	318	11742	LumSec	MIR4257	0.655	3.41E-15	8.49E-14
chr1q_gain	318	11742	LumSec	LEFTY1	0.852	3.42E-15	8.49E-14
chr1q_gain	318	11742	LumSec	RASAL2	0.66	5.94E-15	1.44E-13
chr1q_gain	318	11742	LumSec	B3GALNT2	0.743	6.29E-15	1.49E-13
chr1q_gain	318	11742	LumSec	MPZL1	0.699	6.48E-15	1.51E-13
chr1q_gain	318	11742	LumSec	FCAMR	0.824	9.67E-15	2.20E-13
chr1q_gain	318	11742	LumSec	ATP1B1	0.674	1.30E-14	2.90E-13
chr1q_gain	318	11742	LumSec	PIGR	0.833	1.62E-14	3.52E-13
chr1q_gain	318	11742	LumSec	TXNIP	0.814	1.72E-14	3.68E-13
chr1q_gain	318	11742	LumSec	CGN	0.709	2.65E-14	5.55E-13
chr1q_gain	318	11742	LumSec	NAV1	0.669	4.41E-14	9.05E-13
chr1q_gain	318	11742	LumSec	CLK2	0.775	4.81E-14	9.69E-13
chr1q_gain	318	11742	LumSec	EFNA1	0.654	5.08E-14	1.00E-12
chr1q_gain	318	11742	LumSec	SNRPE	0.708	5.21E-14	1.01E-12

chr1q_gain	318	11742	LumSec	EFNA3	0.598	8.25E-14	1.57E-12
chr1q_gain	318	11742	LumSec	PMF1	0.88	9.42E-14	1.76E-12
chr1q_gain	318	11742	LumSec	LAMC1	0.679	9.71E-14	1.78E-12
chr1q_gain	318	11742	LumSec	PYCR2	0.878	9.83E-14	1.78E-12
chr1q_gain	318	11742	LumSec	CRTC2	0.58	1.05E-13	1.85E-12
chr1q_gain	318	11742	LumSec	ELF3	0.535	1.05E-13	1.85E-12
chr1q_gain	318	11742	LumSec	TRIM46	0.76	1.09E-13	1.87E-12
chr1q_gain	318	11742	LumSec	RGS1	0.932	1.19E-13	2.01E-12
chr1q_gain	318	11742	LumSec	SLC26A9	0.84	1.21E-13	2.02E-12
chr1q_gain	318	11742	LumSec	SDE2	0.723	1.31E-13	2.15E-12
chr1q_gain	318	11742	LumSec	MIR92B	0.753	1.52E-13	2.46E-12
chr1q_gain	318	11742	LumSec	ZNF687	0.676	1.79E-13	2.86E-12
chr1q_gain	318	11742	LumSec	NEK2	0.637	1.86E-13	2.92E-12
chr1q_gain	318	11742	LumSec	KRTCAP2	0.825	1.92E-13	2.97E-12
chr1q_gain	318	11742	LumSec	RAB4A	0.577	3.34E-13	5.10E-12
chr1q_gain	318	11742	LumSec	HSPA6	0.994	3.94E-13	5.93E-12
chr1q_gain	318	11742	LumSec	ABCB10	0.755	4.26E-13	6.32E-12
chr1q_gain	318	11742	LumSec	SIPA1L2	0.653	4.37E-13	6.39E-12
chr1q_gain	318	11742	LumSec	ARV1	0.944	5.74E-13	8.28E-12
chr1q_gain	318	11742	LumSec	PMF1-BGLAP	0.846	6.76E-13	9.62E-12
chr1q_gain	318	11742	LumSec	MIR205HG	0.824	7.21E-13	1.01E-11
chr1q_gain	318	11742	LumSec	ZBTB7B	0.628	7.41E-13	1.03E-11
chr1q_gain	318	11742	LumSec	NFASC	0.623	7.70E-13	1.05E-11
chr1q_gain	318	11742	LumSec	CRABP2	0.694	1.18E-12	1.60E-11
chr1q_gain	318	11742	LumSec	LAMC2	0.732	1.24E-12	1.64E-11
chr1q_gain	318	11742	LumSec	PLXNA2	0.506	1.25E-12	1.64E-11
chr1q_gain	318	11742	LumSec	SLC50A1	0.672	1.26E-12	1.64E-11
chr1q_gain	318	11742	LumSec	NVL	0.661	1.42E-12	1.83E-11
chr1q_gain	318	11742	LumSec	SNAP47	0.67	1.50E-12	1.91E-11
chr1q_gain	318	11742	LumSec	THBS3	0.755	1.59E-12	1.99E-11
chr1q_gain	318	11742	LumSec	SLC30A1	0.61	1.66E-12	2.06E-11
chr1q_gain	318	11742	LumSec	NES	0.656	1.74E-12	2.13E-11
chr1q_gain	318	11742	LumSec	S100A9	0.866	1.76E-12	2.13E-11
chr1q_gain	318	11742	LumSec	OLFML2B	0.969	1.93E-12	2.29E-11
chr1q_gain	318	11742	LumSec	ACBD3	0.515	1.93E-12	2.29E-11
chr1q_gain	318	11742	LumSec	SLC39A1	0.544	1.99E-12	2.33E-11
chr1q_gain	318	11742	LumSec	TARBP1	0.745	2.03E-12	2.35E-11
chr1q_gain	318	11742	LumSec	PMVK	0.788	2.69E-12	3.09E-11
chr1q_gain	318	11742	LumSec	TIPRL	1.058	2.73E-12	3.10E-11
chr1q_gain	318	11742	LumSec	F11R	0.546	2.93E-12	3.29E-11
chr1q_gain	318	11742	LumSec	SNAPIN	0.93	2.99E-12	3.32E-11
chr1q_gain	318	11742	LumSec	G0S2	0.73	3.28E-12	3.61E-11
chr1q_gain	318	11742	LumSec	CAPN2	0.591	3.37E-12	3.68E-11
chr1q_gain	318	11742	LumSec	CFAP45	0.742	3.72E-12	4.01E-11
chr1q_gain	318	11742	LumSec	TSNAX-DISC1	0.587	5.70E-12	6.05E-11
chr1q_gain	318	11742	LumSec	RGS13	0.792	5.72E-12	6.05E-11
chr1q_gain	318	11742	LumSec	PPP1R15B	0.72	5.98E-12	6.26E-11
chr1q_gain	318	11742	LumSec	NUAK2	0.737	6.68E-12	6.93E-11
chr1q_gain	318	11742	LumSec	ATF3	0.467	1.31E-11	1.35E-10
chr1q_gain	318	11742	LumSec	INTS7	0.666	1.40E-11	1.43E-10
chr1q_gain	318	11742	LumSec	PRELP	0.654	1.48E-11	1.49E-10
chr1q_gain	318	11742	LumSec	FMOD	0.641	1.68E-11	1.68E-10
chr1q_gain	318	11742	LumSec	FBXO28	0.619	1.70E-11	1.68E-10
chr1q_gain	318	11742	LumSec	ADAMTSL4	0.569	1.71E-11	1.68E-10
chr1q_gain	318	11742	LumSec	GALNT2	0.447	1.76E-11	1.71E-10
chr1q_gain	318	11742	LumSec	UBAP2L	0.705	1.77E-11	1.71E-10
chr1q_gain	318	11742	LumSec	KIAA1614	0.752	1.82E-11	1.72E-10
chr1q_gain	318	11742	LumSec	DYRK3	0.648	1.82E-11	1.72E-10
chr1q_gain	318	11742	LumSec	EFNA4	0.823	1.89E-11	1.77E-10

chr1q_gain	318	11742	LumSec	CD34	0.596	2.12E-11	1.97E-10
chr1q_gain	318	11742	LumSec	NENF	0.618	2.25E-11	2.07E-10
chr1q_gain	318	11742	LumSec	LOC148696	0.642	2.35E-11	2.14E-10
chr1q_gain	318	11742	LumSec	ENAH	0.503	2.97E-11	2.69E-10
chr1q_gain	318	11742	LumSec	RASAL2-AS1	0.644	3.16E-11	2.84E-10
chr1q_gain	318	11742	LumSec	FCMR	0.837	3.52E-11	3.13E-10
chr1q_gain	318	11742	LumSec	CREG1	0.738	3.66E-11	3.23E-10
chr1q_gain	318	11742	LumSec	ZNF672	0.734	3.69E-11	3.23E-10
chr1q_gain	318	11742	LumSec	COG2	0.74	4.08E-11	3.54E-10
chr1q_gain	318	11742	LumSec	COQ8A	0.629	4.44E-11	3.83E-10
chr1q_gain	318	11742	LumSec	S100A8	1.275	4.71E-11	4.02E-10
chr1q_gain	318	11742	LumSec	DISC1	0.648	4.88E-11	4.14E-10
chr1q_gain	318	11742	LumSec	DUSP10	0.618	5.54E-11	4.66E-10
chr1q_gain	318	11742	LumSec	RORC	0.701	5.85E-11	4.88E-10
chr1q_gain	318	11742	LumSec	S100A16	0.707	6.78E-11	5.61E-10
chr1q_gain	318	11742	LumSec	RGS2	0.703	7.31E-11	6.01E-10
chr1q_gain	318	11742	LumSec	DCST2	0.825	7.51E-11	6.12E-10
chr1q_gain	318	11742	LumSec	SHC1	0.622	7.63E-11	6.17E-10
chr1q_gain	318	11742	LumSec	C2CD4D-AS1	0.73	8.80E-11	7.07E-10
chr1q_gain	318	11742	LumSec	RD3	0.687	9.55E-11	7.61E-10
chr1q_gain	318	11742	LumSec	LINC00628	0.704	1.06E-10	8.42E-10
chr1q_gain	318	11742	LumSec	HAX1	0.992	1.08E-10	8.48E-10
chr1q_gain	318	11742	LumSec	ITPKB	0.499	1.18E-10	9.19E-10
chr1q_gain	318	11742	LumSec	CD46	0.661	1.24E-10	9.57E-10
chr1q_gain	318	11742	LumSec	ENSA	0.721	1.37E-10	1.05E-09
chr1q_gain	318	11742	LumSec	ARNT	0.875	1.38E-10	1.06E-09
chr1q_gain	318	11742	LumSec	PKP1	0.499	1.60E-10	1.21E-09
chr1q_gain	318	11742	LumSec	YOD1	0.651	1.91E-10	1.44E-09
chr1q_gain	318	11742	LumSec	C2CD4D	0.745	1.98E-10	1.48E-09
chr1q_gain	318	11742	LumSec	S100A14	1.031	2.00E-10	1.48E-09
chr1q_gain	318	11742	LumSec	ADORA1	0.584	2.33E-10	1.72E-09
chr1q_gain	318	11742	LumSec	NOS1AP	0.564	2.45E-10	1.79E-09
chr1q_gain	318	11742	LumSec	C1orf105	0.518	2.57E-10	1.87E-09
chr1q_gain	318	11742	LumSec	CHD1L	0.875	2.66E-10	1.92E-09
chr1q_gain	318	11742	LumSec	TOR1AIP2	0.782	2.99E-10	2.15E-09
chr1q_gain	318	11742	LumSec	SCYL3	0.857	3.12E-10	2.22E-09
chr1q_gain	318	11742	LumSec	DTL	0.675	3.24E-10	2.29E-09
chr1q_gain	318	11742	LumSec	RPRD2	0.824	3.58E-10	2.52E-09
chr1q_gain	318	11742	LumSec	PPP2R5A	0.583	3.82E-10	2.67E-09
chr1q_gain	318	11742	LumSec	HDGF	0.538	3.89E-10	2.69E-09
chr1q_gain	318	11742	LumSec	FALEC	0.739	3.90E-10	2.69E-09
chr1q_gain	318	11742	LumSec	GPA33	1.065	3.95E-10	2.71E-09
chr1q_gain	318	11742	LumSec	SYT11	1.085	5.01E-10	3.41E-09
chr1q_gain	318	11742	LumSec	NSL1	0.701	5.22E-10	3.53E-09
chr1q_gain	318	11742	LumSec	UCHL5	0.784	5.62E-10	3.77E-09
chr1q_gain	318	11742	LumSec	PPOX	0.617	5.83E-10	3.89E-09
chr1q_gain	318	11742	LumSec	GLUL	0.681	6.49E-10	4.31E-09
chr1q_gain	318	11742	LumSec	ETNK2	0.693	7.39E-10	4.87E-09
chr1q_gain	318	11742	LumSec	RNU5F-1	0.612	8.11E-10	5.31E-09
chr1q_gain	318	11742	LumSec	PIP5K1A	0.724	8.18E-10	5.33E-09
chr1q_gain	318	11742	LumSec	PFDN2	0.753	8.38E-10	5.42E-09
chr1q_gain	318	11742	LumSec	PIK3C2B	0.515	8.93E-10	5.71E-09
chr1q_gain	318	11742	LumSec	SUCO	0.59	8.93E-10	5.71E-09
chr1q_gain	318	11742	LumSec	LINC00467	0.678	1.01E-09	6.40E-09
chr1q_gain	318	11742	LumSec	MIR554	0.633	1.01E-09	6.40E-09
chr1q_gain	318	11742	LumSec	EDEM3	0.785	1.13E-09	7.12E-09
chr1q_gain	318	11742	LumSec	RFX5	0.67	1.31E-09	8.20E-09
chr1q_gain	318	11742	LumSec	GOLT1A	0.782	1.37E-09	8.51E-09
chr1q_gain	318	11742	LumSec	LAD1	0.679	1.41E-09	8.70E-09

chr1q_gain	318	11742	LumSec	HSD11B1	0.666	1.50E-09	9.17E-09
chr1q_gain	318	11742	LumSec	TMCC2	0.591	1.50E-09	9.17E-09
chr1q_gain	318	11742	LumSec	MIR3122	0.796	1.51E-09	9.19E-09
chr1q_gain	318	11742	LumSec	C1orf100	0.504	1.57E-09	9.49E-09
chr1q_gain	318	11742	LumSec	SLC19A2	0.626	1.63E-09	9.76E-09
chr1q_gain	318	11742	LumSec	LGR6	0.56	1.73E-09	1.03E-08
chr1q_gain	318	11742	LumSec	ETV3	0.848	1.74E-09	1.03E-08
chr1q_gain	318	11742	LumSec	CFAP126	0.632	1.76E-09	1.04E-08
chr1q_gain	318	11742	LumSec	SNX27	0.647	1.83E-09	1.08E-08
chr1q_gain	318	11742	LumSec	HCN3	0.755	2.01E-09	1.18E-08
chr1q_gain	318	11742	LumSec	UAP1	0.663	2.20E-09	1.28E-08
chr1q_gain	318	11742	LumSec	SSR2	0.743	2.29E-09	1.31E-08
chr1q_gain	318	11742	LumSec	CDC42BPA	0.695	2.29E-09	1.31E-08
chr1q_gain	318	11742	LumSec	MIR9-1	0.745	2.32E-09	1.33E-08
chr1q_gain	318	11742	LumSec	SERTAD4-AS1	0.632	2.46E-09	1.40E-08
chr1q_gain	318	11742	LumSec	CERS2	0.824	2.51E-09	1.42E-08
chr1q_gain	318	11742	LumSec	ARID4B	0.619	2.53E-09	1.42E-08
chr1q_gain	318	11742	LumSec	SLC27A3	0.74	2.64E-09	1.48E-08
chr1q_gain	318	11742	LumSec	BCAN	0.551	2.82E-09	1.57E-08
chr1q_gain	318	11742	LumSec	KMO	0.805	2.95E-09	1.63E-08
chr1q_gain	318	11742	LumSec	ISG20L2	0.74	3.15E-09	1.74E-08
chr1q_gain	318	11742	LumSec	MIR5008	0.714	3.28E-09	1.80E-08
chr1q_gain	318	11742	LumSec	GABPB2	0.992	3.30E-09	1.80E-08
chr1q_gain	318	11742	LumSec	ZC3H11A	0.669	3.44E-09	1.86E-08
chr1q_gain	318	11742	LumSec	ARHGEF2	0.514	3.57E-09	1.92E-08
chr1q_gain	318	11742	LumSec	PBXIP1	0.711	3.58E-09	1.92E-08
chr1q_gain	318	11742	LumSec	TMEM63A	0.664	3.65E-09	1.95E-08
chr1q_gain	318	11742	LumSec	GON4L	0.878	4.66E-09	2.47E-08
chr1q_gain	318	11742	LumSec	UFC1	0.813	4.66E-09	2.47E-08
chr1q_gain	318	11742	LumSec	TRAF3IP3	0.651	5.22E-09	2.75E-08
chr1q_gain	318	11742	LumSec	SERTAD4	0.668	5.29E-09	2.77E-08
chr1q_gain	318	11742	LumSec	TOR1AIP1	0.725	5.82E-09	3.03E-08
chr1q_gain	318	11742	LumSec	PTPN14	0.499	6.24E-09	3.23E-08
chr1q_gain	318	11742	LumSec	RGL1	0.451	6.59E-09	3.40E-08
chr1q_gain	318	11742	LumSec	XCL1	0.703	6.83E-09	3.51E-08
chr1q_gain	318	11742	LumSec	LMX1A	0.576	7.14E-09	3.65E-08
chr1q_gain	318	11742	LumSec	ZBED6	0.691	7.33E-09	3.73E-08
chr1q_gain	318	11742	LumSec	PARP1	0.643	7.78E-09	3.94E-08
chr1q_gain	318	11742	LumSec	PEX11B	0.696	7.89E-09	3.97E-08
chr1q_gain	318	11742	LumSec	CCDC185	0.791	8.07E-09	4.05E-08
chr1q_gain	318	11742	LumSec	YY1AP1	0.568	8.21E-09	4.10E-08
chr1q_gain	318	11742	LumSec	VPS72	0.761	8.89E-09	4.41E-08
chr1q_gain	318	11742	LumSec	MTX1	0.76	8.92E-09	4.41E-08
chr1q_gain	318	11742	LumSec	PCNX2	0.592	9.43E-09	4.63E-08
chr1q_gain	318	11742	LumSec	TUFT1	0.604	9.46E-09	4.63E-08
chr1q_gain	318	11742	LumSec	TSEN15	0.713	9.68E-09	4.72E-08
chr1q_gain	318	11742	LumSec	SEMA6C	0.796	9.90E-09	4.81E-08
chr1q_gain	318	11742	LumSec	MIR4742	0.489	1.01E-08	4.86E-08
chr1q_gain	318	11742	LumSec	AGT	1.225	1.06E-08	5.11E-08
chr1q_gain	318	11742	LumSec	KIAA0040	0.531	1.07E-08	5.11E-08
chr1q_gain	318	11742	LumSec	PPFIA4	0.593	1.08E-08	5.15E-08
chr1q_gain	318	11742	LumSec	POU2F1	0.578	1.12E-08	5.30E-08
chr1q_gain	318	11742	LumSec	C1orf43	0.667	1.33E-08	6.29E-08
chr1q_gain	318	11742	LumSec	DCAF8	0.682	1.36E-08	6.40E-08
chr1q_gain	318	11742	LumSec	RC3H1	0.565	1.37E-08	6.40E-08
chr1q_gain	318	11742	LumSec	SNORA14B	0.986	1.39E-08	6.47E-08
chr1q_gain	318	11742	LumSec	SWT1	0.72	1.43E-08	6.64E-08
chr1q_gain	318	11742	LumSec	RBBP5	0.806	1.45E-08	6.70E-08
chr1q_gain	318	11742	LumSec	LPGAT1	0.537	1.49E-08	6.84E-08

chr1q_gain	318	11742	LumSec	RHEX	1.06	1.50E-08	6.88E-08
chr1q_gain	318	11742	LumSec	NEK7	0.656	1.64E-08	7.50E-08
chr1q_gain	318	11742	LumSec	LRRC71	0.774	1.73E-08	7.86E-08
chr1q_gain	318	11742	LumSec	FDPS	0.668	1.74E-08	7.88E-08
chr1q_gain	318	11742	LumSec	LEMD1	0.656	1.98E-08	8.92E-08
chr1q_gain	318	11742	LumSec	ESRRG	0.355	2.11E-08	9.49E-08
chr1q_gain	318	11742	LumSec	HNRNPU	0.674	2.23E-08	9.96E-08
chr1q_gain	318	11742	LumSec	TMCO1	0.565	2.58E-08	1.15E-07
chr1q_gain	318	11742	LumSec	FCGR3A	1.049	2.60E-08	1.15E-07
chr1q_gain	318	11742	LumSec	MGST3	0.599	2.81E-08	1.24E-07
chr1q_gain	318	11742	LumSec	ATP2B4	0.577	3.00E-08	1.32E-07
chr1q_gain	318	11742	LumSec	CD55	0.564	3.03E-08	1.32E-07
chr1q_gain	318	11742	LumSec	CAPN8	0.403	3.12E-08	1.36E-07
chr1q_gain	318	11742	LumSec	LINC01136	0.676	3.34E-08	1.45E-07
chr1q_gain	318	11742	LumSec	GBA	0.735	3.43E-08	1.48E-07
chr1q_gain	318	11742	LumSec	DEDD	0.727	3.56E-08	1.53E-07
chr1q_gain	318	11742	LumSec	POGZ	0.57	3.59E-08	1.54E-07
chr1q_gain	318	11742	LumSec	TAF5L	0.508	3.82E-08	1.63E-07
chr1q_gain	318	11742	LumSec	CREB3L4	0.527	4.15E-08	1.76E-07
chr1q_gain	318	11742	LumSec	ZNF692	0.516	4.50E-08	1.91E-07
chr1q_gain	318	11742	LumSec	VSIG8	0.962	4.63E-08	1.95E-07
chr1q_gain	318	11742	LumSec	MIR5187	0.843	4.69E-08	1.97E-07
chr1q_gain	318	11742	LumSec	NIT1	0.705	4.74E-08	1.99E-07
chr1q_gain	318	11742	LumSec	PYGO2	0.69	5.22E-08	2.18E-07
chr1q_gain	318	11742	LumSec	EGLN1	0.69	5.53E-08	2.29E-07
chr1q_gain	318	11742	LumSec	MIR3124	0.767	5.54E-08	2.29E-07
chr1q_gain	318	11742	LumSec	MIR4258	0.643	5.61E-08	2.31E-07
chr1q_gain	318	11742	LumSec	S100A12	0.853	5.82E-08	2.39E-07
chr1q_gain	318	11742	LumSec	CDK18	0.457	5.94E-08	2.43E-07
chr1q_gain	318	11742	LumSec	SCAMP3	0.692	6.03E-08	2.46E-07
chr1q_gain	318	11742	LumSec	SNHG28	0.876	6.18E-08	2.51E-07
chr1q_gain	318	11742	LumSec	ASTN1	0.409	6.20E-08	2.51E-07
chr1q_gain	318	11742	LumSec	ZNF281	0.675	6.31E-08	2.54E-07
chr1q_gain	318	11742	LumSec	QSOX1	0.585	6.62E-08	2.66E-07
chr1q_gain	318	11742	LumSec	MFSD4A-AS1	0.63	6.69E-08	2.67E-07
chr1q_gain	318	11742	LumSec	DDX59	0.649	7.37E-08	2.94E-07
chr1q_gain	318	11742	LumSec	TCHH	0.819	7.51E-08	2.98E-07
chr1q_gain	318	11742	LumSec	TDRKH	0.69	8.03E-08	3.18E-07
chr1q_gain	318	11742	LumSec	CKS1B	0.635	8.21E-08	3.23E-07
chr1q_gain	318	11742	LumSec	APOA2	0.848	8.53E-08	3.35E-07
chr1q_gain	318	11742	LumSec	TOMM40L	0.821	9.77E-08	3.82E-07
chr1q_gain	318	11742	LumSec	TRMT1L	0.735	9.87E-08	3.85E-07
chr1q_gain	318	11742	LumSec	WNT3A	0.48	1.02E-07	3.97E-07
chr1q_gain	318	11742	LumSec	OTUD7B	0.61	1.07E-07	4.15E-07
chr1q_gain	318	11742	LumSec	POLR3GL	0.605	1.12E-07	4.32E-07
chr1q_gain	318	11742	LumSec	ZBTB18	0.551	1.21E-07	4.64E-07
chr1q_gain	318	11742	LumSec	XPR1	0.485	1.23E-07	4.72E-07
chr1q_gain	318	11742	LumSec	GATAD2B	0.544	1.25E-07	4.77E-07
chr1q_gain	318	11742	LumSec	DUSP27	0.932	1.26E-07	4.77E-07
chr1q_gain	318	11742	LumSec	NTPCR	0.659	1.30E-07	4.94E-07
chr1q_gain	318	11742	LumSec	SOX13	0.484	1.38E-07	5.21E-07
chr1q_gain	318	11742	LumSec	DENND1B	0.513	1.42E-07	5.32E-07
chr1q_gain	318	11742	LumSec	PSEN2	0.624	1.47E-07	5.52E-07
chr1q_gain	318	11742	LumSec	ADIPOR1	0.728	1.50E-07	5.61E-07
chr1q_gain	318	11742	LumSec	RXFP4	0.7	1.61E-07	6.01E-07
chr1q_gain	318	11742	LumSec	S100A10	0.473	1.87E-07	6.92E-07
chr1q_gain	318	11742	LumSec	JMJD4	0.566	1.88E-07	6.96E-07
chr1q_gain	318	11742	LumSec	FAM78B	0.6	1.94E-07	7.14E-07
chr1q_gain	318	11742	LumSec	FLAD1	0.693	2.00E-07	7.33E-07

chr1q_gain	318	11742	LumSec	MFSD4A	0.706	2.54E-07	9.28E-07
chr1q_gain	318	11742	LumSec	TP53BP2	0.553	2.57E-07	9.38E-07
chr1q_gain	318	11742	LumSec	TNFAIP8L2	1.318	2.77E-07	1.01E-06
chr1q_gain	318	11742	LumSec	MAPKAPK2	0.629	2.82E-07	1.02E-06
chr1q_gain	318	11742	LumSec	TMEM9	0.591	2.85E-07	1.03E-06
chr1q_gain	318	11742	LumSec	PRUNE1	0.664	2.87E-07	1.03E-06
chr1q_gain	318	11742	LumSec	CATSPERE	0.429	2.93E-07	1.05E-06
chr1q_gain	318	11742	LumSec	S100A2	0.619	2.94E-07	1.05E-06
chr1q_gain	318	11742	LumSec	S100A3	1.039	2.97E-07	1.06E-06
chr1q_gain	318	11742	LumSec	INAVA	0.808	3.07E-07	1.09E-06
chr1q_gain	318	11742	LumSec	AURKAP1	0.644	3.33E-07	1.18E-06
chr1q_gain	318	11742	LumSec	RABIF	0.777	3.36E-07	1.18E-06
chr1q_gain	318	11742	LumSec	MRPL24	0.618	3.40E-07	1.19E-06
chr1q_gain	318	11742	LumSec	CAMK1G	0.623	3.42E-07	1.20E-06
chr1q_gain	318	11742	LumSec	CRB1	0.552	3.58E-07	1.25E-06
chr1q_gain	318	11742	LumSec	PEAR1	0.811	3.86E-07	1.34E-06
chr1q_gain	318	11742	LumSec	ARL8A	0.68	4.14E-07	1.44E-06
chr1q_gain	318	11742	LumSec	KCNN3	0.492	4.39E-07	1.52E-06
chr1q_gain	318	11742	LumSec	IRF6	0.642	4.44E-07	1.53E-06
chr1q_gain	318	11742	LumSec	F5	0.716	4.52E-07	1.55E-06
chr1q_gain	318	11742	LumSec	GPATCH4	0.908	4.53E-07	1.55E-06
chr1q_gain	318	11742	LumSec	IGSF8	0.638	4.59E-07	1.57E-06
chr1q_gain	318	11742	LumSec	THEM4	0.533	4.89E-07	1.66E-06
chr1q_gain	318	11742	LumSec	LAMTOR2	0.619	4.91E-07	1.66E-06
chr1q_gain	318	11742	LumSec	BRINP2	0.64	5.24E-07	1.77E-06
chr1q_gain	318	11742	LumSec	RHOU	0.643	5.46E-07	1.84E-06
chr1q_gain	318	11742	LumSec	NUP133	0.647	5.86E-07	1.97E-06
chr1q_gain	318	11742	LumSec	FMO2	0.944	6.65E-07	2.23E-06
chr1q_gain	318	11742	LumSec	URB2	0.484	6.89E-07	2.30E-06
chr1q_gain	318	11742	LumSec	RASSF5	0.437	7.11E-07	2.36E-06
chr1q_gain	318	11742	LumSec	LINGO4	1.268	7.26E-07	2.41E-06
chr1q_gain	318	11742	LumSec	GOLPH3L	0.588	8.24E-07	2.72E-06
chr1q_gain	318	11742	LumSec	RPS10P7	0.479	9.07E-07	2.99E-06
chr1q_gain	318	11742	LumSec	LBR	0.601	9.79E-07	3.22E-06
chr1q_gain	318	11742	LumSec	ASH1L	0.694	9.86E-07	3.23E-06
chr1q_gain	318	11742	LumSec	CENPF	0.618	9.98E-07	3.26E-06
chr1q_gain	318	11742	LumSec	IVNS1ABP	0.646	1.04E-06	3.37E-06
chr1q_gain	318	11742	LumSec	GAS5	0.648	1.07E-06	3.49E-06
chr1q_gain	318	11742	LumSec	NMNAT2	0.538	1.11E-06	3.58E-06
chr1q_gain	318	11742	LumSec	FMO1	0.712	1.14E-06	3.67E-06
chr1q_gain	318	11742	LumSec	SFT2D2	0.78	1.14E-06	3.68E-06
chr1q_gain	318	11742	LumSec	NECTIN4	0.568	1.20E-06	3.85E-06
chr1q_gain	318	11742	LumSec	LINC00184	0.536	1.36E-06	4.35E-06
chr1q_gain	318	11742	LumSec	COLGALT2	0.529	1.36E-06	4.35E-06
chr1q_gain	318	11742	LumSec	DISP1	0.39	1.37E-06	4.35E-06
chr1q_gain	318	11742	LumSec	SETDB1	0.805	1.46E-06	4.63E-06
chr1q_gain	318	11742	LumSec	PROX1	0.749	1.57E-06	4.95E-06
chr1q_gain	318	11742	LumSec	ZBTB37	0.615	1.69E-06	5.32E-06
chr1q_gain	318	11742	LumSec	MIR921	0.716	1.92E-06	6.04E-06
chr1q_gain	318	11742	LumSec	C4BPB	0.908	1.94E-06	6.09E-06
chr1q_gain	318	11742	LumSec	RRNAD1	0.642	1.99E-06	6.20E-06
chr1q_gain	318	11742	LumSec	TNNI1	0.535	2.04E-06	6.36E-06
chr1q_gain	318	11742	LumSec	MIR205	0.811	2.07E-06	6.43E-06
chr1q_gain	318	11742	LumSec	MIR556	0.61	2.08E-06	6.43E-06
chr1q_gain	318	11742	LumSec	RCOR3	0.633	2.13E-06	6.59E-06
chr1q_gain	318	11742	LumSec	RABGAP1L	0.386	2.15E-06	6.63E-06
chr1q_gain	318	11742	LumSec	MINDY1	0.61	2.23E-06	6.86E-06
chr1q_gain	318	11742	LumSec	SNORD78	0.647	2.35E-06	7.19E-06
chr1q_gain	318	11742	LumSec	SH3BP5L	0.643	2.38E-06	7.26E-06

chr1q_gain	318	11742	LumSec	PAQR6	0.683	2.44E-06	7.42E-06
chr1q_gain	318	11742	LumSec	OPN3	0.735	2.46E-06	7.48E-06
chr1q_gain	318	11742	LumSec	ZBTB41	0.721	2.50E-06	7.57E-06
chr1q_gain	318	11742	LumSec	IBA57	0.453	2.51E-06	7.58E-06
chr1q_gain	318	11742	LumSec	DPM3	0.75	2.54E-06	7.62E-06
chr1q_gain	318	11742	LumSec	OAZ3	0.755	2.54E-06	7.62E-06
chr1q_gain	318	11742	LumSec	SNORD80	0.649	2.56E-06	7.66E-06
chr1q_gain	318	11742	LumSec	MSTO1	0.6	2.60E-06	7.76E-06
chr1q_gain	318	11742	LumSec	SNORD79	0.646	2.63E-06	7.83E-06
chr1q_gain	318	11742	LumSec	PCAT6	0.499	2.64E-06	7.85E-06
chr1q_gain	318	11742	LumSec	DPT	0.296	2.66E-06	7.87E-06
chr1q_gain	318	11742	LumSec	IL19	0.796	2.83E-06	8.34E-06
chr1q_gain	318	11742	LumSec	PHLDA3	0.427	2.93E-06	8.61E-06
chr1q_gain	318	11742	LumSec	S100A11	0.483	3.07E-06	8.99E-06
chr1q_gain	318	11742	LumSec	RXRG	0.415	3.12E-06	9.11E-06
chr1q_gain	318	11742	LumSec	TPR	0.509	3.12E-06	9.11E-06
chr1q_gain	318	11742	LumSec	CACYBP	0.582	3.20E-06	9.33E-06
chr1q_gain	318	11742	LumSec	ODR4	0.507	3.27E-06	9.50E-06
chr1q_gain	318	11742	LumSec	KCTD3	0.518	3.39E-06	9.83E-06
chr1q_gain	318	11742	LumSec	LOC100506023	0.502	3.80E-06	1.10E-05
chr1q_gain	318	11742	LumSec	WNT9A	0.519	4.01E-06	1.16E-05
chr1q_gain	318	11742	LumSec	ELK4	0.449	4.12E-06	1.18E-05
chr1q_gain	318	11742	LumSec	MIA3	0.639	4.18E-06	1.20E-05
chr1q_gain	318	11742	LumSec	KLHDC8A	0.579	4.24E-06	1.21E-05
chr1q_gain	318	11742	LumSec	IGFN1	0.587	4.45E-06	1.27E-05
chr1q_gain	318	11742	LumSec	UBQLN4	0.556	4.53E-06	1.29E-05
chr1q_gain	318	11742	LumSec	SNORD47	0.647	4.59E-06	1.30E-05
chr1q_gain	318	11742	LumSec	2-Mar	0.593	4.84E-06	1.37E-05
chr1q_gain	318	11742	LumSec	MIR3658	0.944	4.91E-06	1.38E-05
chr1q_gain	318	11742	LumSec	RUSC1	0.627	4.91E-06	1.38E-05
chr1q_gain	318	11742	LumSec	PGLYRP4	0.896	5.14E-06	1.44E-05
chr1q_gain	318	11742	LumSec	GPR89B	0.936	5.43E-06	1.52E-05
chr1q_gain	318	11742	LumSec	SNORD75	0.636	5.61E-06	1.56E-05
chr1q_gain	318	11742	LumSec	GORAB	0.488	6.04E-06	1.68E-05
chr1q_gain	318	11742	LumSec	FCRL2	0.736	6.18E-06	1.72E-05
chr1q_gain	318	11742	LumSec	FCGR2A	0.808	6.28E-06	1.74E-05
chr1q_gain	318	11742	LumSec	CNST	0.513	6.34E-06	1.75E-05
chr1q_gain	318	11742	LumSec	ARF1	0.465	6.54E-06	1.80E-05
chr1q_gain	318	11742	LumSec	SNORD76	0.631	6.65E-06	1.83E-05
chr1q_gain	318	11742	LumSec	C1orf229	1.002	6.70E-06	1.84E-05
chr1q_gain	318	11742	LumSec	ATF6	0.731	6.83E-06	1.86E-05
chr1q_gain	318	11742	LumSec	BCL9	0.462	6.97E-06	1.90E-05
chr1q_gain	318	11742	LumSec	ADAMTS4	0.496	7.17E-06	1.95E-05
chr1q_gain	318	11742	LumSec	C1orf74	0.839	7.18E-06	1.95E-05
chr1q_gain	318	11742	LumSec	SNORD44	0.627	7.43E-06	2.01E-05
chr1q_gain	318	11742	LumSec	SNORD81	0.637	7.66E-06	2.06E-05
chr1q_gain	318	11742	LumSec	ANP32E	0.469	7.79E-06	2.10E-05
chr1q_gain	318	11742	LumSec	SNORD77	0.626	7.88E-06	2.11E-05
chr1q_gain	318	11742	LumSec	USF1	0.598	8.13E-06	2.18E-05
chr1q_gain	318	11742	LumSec	GUK1	0.428	8.23E-06	2.20E-05
chr1q_gain	318	11742	LumSec	S100A4	0.738	8.54E-06	2.27E-05
chr1q_gain	318	11742	LumSec	VANGL2	0.509	8.87E-06	2.36E-05
chr1q_gain	318	11742	LumSec	UHMK1	0.524	9.01E-06	2.39E-05
chr1q_gain	318	11742	LumSec	NHLH1	0.728	9.18E-06	2.43E-05
chr1q_gain	318	11742	LumSec	MIR548F1	0.41	9.66E-06	2.55E-05
chr1q_gain	318	11742	LumSec	SNORD74	0.621	1.03E-05	2.70E-05
chr1q_gain	318	11742	LumSec	SHISA4	0.585	1.09E-05	2.87E-05
chr1q_gain	318	11742	LumSec	TIMM17A	0.812	1.11E-05	2.90E-05
chr1q_gain	318	11742	LumSec	RUSC1-AS1	0.624	1.13E-05	2.96E-05

chr1q_gain	318	11742	LumSec	TADA1	0.721	1.15E-05	3.00E-05
chr1q_gain	318	11742	LumSec	TRIM17	0.543	1.17E-05	3.04E-05
chr1q_gain	318	11742	LumSec	DUSP23	0.582	1.22E-05	3.15E-05
chr1q_gain	318	11742	LumSec	CCT3	0.656	1.24E-05	3.20E-05
chr1q_gain	318	11742	LumSec	CD160	0.896	1.27E-05	3.26E-05
chr1q_gain	318	11742	LumSec	SMYD3	0.581	1.32E-05	3.40E-05
chr1q_gain	318	11742	LumSec	S100A1	0.671	1.35E-05	3.46E-05
chr1q_gain	318	11742	LumSec	BATF3	0.389	1.36E-05	3.48E-05
chr1q_gain	318	11742	LumSec	NAXE	0.861	1.37E-05	3.50E-05
chr1q_gain	318	11742	LumSec	CHIT1	0.568	1.60E-05	4.07E-05
chr1q_gain	318	11742	LumSec	EFCAB2	0.409	1.62E-05	4.11E-05
chr1q_gain	318	11742	LumSec	TCHHL1	0.493	1.65E-05	4.19E-05
chr1q_gain	318	11742	LumSec	ATP8B2	0.521	1.73E-05	4.38E-05
chr1q_gain	318	11742	LumSec	BPNT1	0.701	1.74E-05	4.40E-05
chr1q_gain	318	11742	LumSec	RNF115	0.667	1.77E-05	4.46E-05
chr1q_gain	318	11742	LumSec	KCNK1	0.594	1.78E-05	4.46E-05
chr1q_gain	318	11742	LumSec	RGS16	0.666	1.78E-05	4.46E-05
chr1q_gain	318	11742	LumSec	STX6	0.387	1.80E-05	4.51E-05
chr1q_gain	318	11742	LumSec	SELENBP1	0.833	1.91E-05	4.77E-05
chr1q_gain	318	11742	LumSec	DISC2	0.929	1.95E-05	4.85E-05
chr1q_gain	318	11742	LumSec	CSRP1	0.444	2.00E-05	4.98E-05
chr1q_gain	318	11742	LumSec	MIR135B	0.422	2.07E-05	5.13E-05
chr1q_gain	318	11742	LumSec	IL20	0.782	2.10E-05	5.18E-05
chr1q_gain	318	11742	LumSec	OR2G3	0.663	2.12E-05	5.23E-05
chr1q_gain	318	11742	LumSec	MARK1	0.576	2.14E-05	5.26E-05
chr1q_gain	318	11742	LumSec	SEC16B	0.571	2.14E-05	5.26E-05
chr1q_gain	318	11742	LumSec	MRPL9	0.824	2.19E-05	5.36E-05
chr1q_gain	318	11742	LumSec	APOBEC4	0.578	2.21E-05	5.41E-05
chr1q_gain	318	11742	LumSec	PEX19	0.639	2.29E-05	5.58E-05
chr1q_gain	318	11742	LumSec	ASH1L-AS1	0.557	2.33E-05	5.68E-05
chr1q_gain	318	11742	LumSec	TOR3A	0.64	2.35E-05	5.69E-05
chr1q_gain	318	11742	LumSec	FCGR1A	0.936	2.37E-05	5.74E-05
chr1q_gain	318	11742	LumSec	CDC73	0.449	2.48E-05	5.98E-05
chr1q_gain	318	11742	LumSec	FAM189B	0.616	2.52E-05	6.07E-05
chr1q_gain	318	11742	LumSec	EIF2D	0.572	2.62E-05	6.30E-05
chr1q_gain	318	11742	LumSec	PGBD2	0.484	2.80E-05	6.73E-05
chr1q_gain	318	11742	LumSec	TSACC	0.581	2.83E-05	6.78E-05
chr1q_gain	318	11742	LumSec	C1orf56	0.704	2.89E-05	6.90E-05
chr1q_gain	318	11742	LumSec	IPO9	0.758	2.90E-05	6.90E-05
chr1q_gain	318	11742	LumSec	DAP3	0.453	2.90E-05	6.90E-05
chr1q_gain	318	11742	LumSec	NDUFS2	0.484	2.95E-05	7.00E-05
chr1q_gain	318	11742	LumSec	SLC45A3	0.374	2.97E-05	7.01E-05
chr1q_gain	318	11742	LumSec	DENND4B	0.552	2.97E-05	7.01E-05
chr1q_gain	318	11742	LumSec	PRRC2C	0.538	2.98E-05	7.01E-05
chr1q_gain	318	11742	LumSec	MAP10	0.68	2.99E-05	7.04E-05
chr1q_gain	318	11742	LumSec	C1orf54	0.729	3.07E-05	7.20E-05
chr1q_gain	318	11742	LumSec	SCARNA4	0.763	3.17E-05	7.41E-05
chr1q_gain	318	11742	LumSec	ARPC5	0.429	3.17E-05	7.41E-05
chr1q_gain	318	11742	LumSec	DARS2	0.576	3.48E-05	8.13E-05
chr1q_gain	318	11742	LumSec	FAM20B	0.635	3.73E-05	8.67E-05
chr1q_gain	318	11742	LumSec	C1orf115	0.52	3.81E-05	8.82E-05
chr1q_gain	318	11742	LumSec	RIT1	0.802	3.81E-05	8.82E-05
chr1q_gain	318	11742	LumSec	C1orf53	0.582	3.82E-05	8.82E-05
chr1q_gain	318	11742	LumSec	S100A5	0.505	3.83E-05	8.84E-05
chr1q_gain	318	11742	LumSec	SEMA4A	0.527	3.91E-05	9.01E-05
chr1q_gain	318	11742	LumSec	POU5F1P4	0.82	4.08E-05	9.37E-05
chr1q_gain	318	11742	LumSec	GGPS1	0.565	4.09E-05	9.38E-05
chr1q_gain	318	11742	LumSec	TRIM11	0.406	4.20E-05	9.61E-05
chr1q_gain	318	11742	LumSec	KDM5B	0.437	4.22E-05	9.64E-05

chr1q_gain	318	11742	LumSec	RAB25	0.631	4.26E-05	9.70E-05
chr1q_gain	318	11742	LumSec	SRGAP2	0.758	4.33E-05	9.83E-05
chr1q_gain	318	11742	LumSec	C1orf21	0.474	4.37E-05	9.91E-05
chr1q_gain	318	11742	LumSec	SMG7	0.385	4.56E-05	1.03E-04
chr1q_gain	318	11742	LumSec	JTB	0.834	4.57E-05	1.03E-04
chr1q_gain	318	11742	LumSec	KHDC4	0.618	4.57E-05	1.03E-04
chr1q_gain	318	11742	LumSec	DCAF6	0.5	4.88E-05	1.10E-04
chr1q_gain	318	11742	LumSec	LOC440700	0.568	5.02E-05	1.13E-04
chr1q_gain	318	11742	LumSec	BNIP1	0.701	5.25E-05	1.18E-04
chr1q_gain	318	11742	LumSec	SCCPDH	0.772	5.32E-05	1.19E-04
chr1q_gain	318	11742	LumSec	MPC2	0.564	5.51E-05	1.23E-04
chr1q_gain	318	11742	LumSec	MIR555	0.894	5.53E-05	1.23E-04
chr1q_gain	318	11742	LumSec	VASH2	0.736	5.58E-05	1.24E-04
chr1q_gain	318	11742	LumSec	MIR488	0.408	5.71E-05	1.27E-04
chr1q_gain	318	11742	LumSec	SHE	0.64	5.80E-05	1.28E-04
chr1q_gain	318	11742	LumSec	DHX9	0.656	5.85E-05	1.29E-04
chr1q_gain	318	11742	LumSec	OR13G1	0.713	6.04E-05	1.33E-04
chr1q_gain	318	11742	LumSec	UBE2T	0.795	6.13E-05	1.35E-04
chr1q_gain	318	11742	LumSec	TEX35	0.469	6.19E-05	1.36E-04
chr1q_gain	318	11742	LumSec	MIR4654	0.478	6.28E-05	1.37E-04
chr1q_gain	318	11742	LumSec	TBCE	0.49	6.78E-05	1.48E-04
chr1q_gain	318	11742	LumSec	CENPL	0.562	6.84E-05	1.49E-04
chr1q_gain	318	11742	LumSec	ZNF669	0.67	7.19E-05	1.56E-04
chr1q_gain	318	11742	LumSec	SPRTN	0.478	7.24E-05	1.57E-04
chr1q_gain	318	11742	LumSec	DSTYK	0.684	7.32E-05	1.59E-04
chr1q_gain	318	11742	LumSec	MLLT11	0.62	7.62E-05	1.65E-04
chr1q_gain	318	11742	LumSec	HORMAD1	0.5	7.75E-05	1.67E-04
chr1q_gain	318	11742	LumSec	GS1-279B7.1	0.606	7.83E-05	1.69E-04
chr1q_gain	318	11742	LumSec	TBX19	0.667	7.93E-05	1.70E-04
chr1q_gain	318	11742	LumSec	AIDA	0.511	8.18E-05	1.75E-04
chr1q_gain	318	11742	LumSec	IARS2	0.622	8.19E-05	1.75E-04
chr1q_gain	318	11742	LumSec	LRRC52	0.458	8.52E-05	1.82E-04
chr1q_gain	318	11742	LumSec	OBSCN	0.341	8.60E-05	1.83E-04
chr1q_gain	318	11742	LumSec	LYST	0.545	8.78E-05	1.87E-04
chr1q_gain	318	11742	LumSec	IQGAP3	0.732	8.96E-05	1.90E-04
chr1q_gain	318	11742	LumSec	KISS1	0.614	9.59E-05	2.03E-04
chr1q_gain	318	11742	LumSec	KIFAP3	0.549	9.73E-05	2.06E-04
chr1q_gain	318	11742	LumSec	LEMD1-AS1	0.703	1.01E-04	2.13E-04
chr1q_gain	318	11742	LumSec	DESI2	0.474	1.01E-04	2.13E-04
chr1q_gain	318	11742	LumSec	SMG5	0.599	1.03E-04	2.16E-04
chr1q_gain	318	11742	LumSec	LINC00303	0.225	1.06E-04	2.22E-04
chr1q_gain	318	11742	LumSec	SYT2	0.374	1.10E-04	2.30E-04
chr1q_gain	318	11742	LumSec	TATDN3	0.733	1.10E-04	2.31E-04
chr1q_gain	318	11742	LumSec	EXOC8	0.481	1.13E-04	2.36E-04
chr1q_gain	318	11742	LumSec	MIR5191	0.733	1.13E-04	2.36E-04
chr1q_gain	318	11742	LumSec	FAM89A	0.802	1.17E-04	2.44E-04
chr1q_gain	318	11742	LumSec	NR5A2	0.654	1.20E-04	2.50E-04
chr1q_gain	318	11742	LumSec	DUSP12	0.501	1.26E-04	2.61E-04
chr1q_gain	318	11742	LumSec	SUSD4	0.278	1.30E-04	2.69E-04
chr1q_gain	318	11742	LumSec	PSMD4	0.614	1.31E-04	2.70E-04
chr1q_gain	318	11742	LumSec	ZNF648	0.232	1.37E-04	2.82E-04
chr1q_gain	318	11742	LumSec	RIAD1	0.341	1.44E-04	2.95E-04
chr1q_gain	318	11742	LumSec	TFB2M	0.499	1.44E-04	2.96E-04
chr1q_gain	318	11742	LumSec	FH	0.514	1.49E-04	3.04E-04
chr1q_gain	318	11742	LumSec	TNNT2	0.382	1.52E-04	3.11E-04
chr1q_gain	318	11742	LumSec	CDC42SE1	0.595	1.59E-04	3.24E-04
chr1q_gain	318	11742	LumSec	THEM5	0.707	1.60E-04	3.26E-04
chr1q_gain	318	11742	LumSec	SPATA17	0.408	1.68E-04	3.42E-04
chr1q_gain	318	11742	LumSec	C1orf131	0.549	1.86E-04	3.77E-04

chr1q_gain	318	11742	LumSec	ATP6V1G3	0.52	1.92E-04	3.89E-04
chr1q_gain	318	11742	LumSec	IL24	0.745	1.94E-04	3.91E-04
chr1q_gain	318	11742	LumSec	BROX	0.508	1.96E-04	3.95E-04
chr1q_gain	318	11742	LumSec	MIR5087	0.597	1.97E-04	3.95E-04
chr1q_gain	318	11742	LumSec	ARHGEF11	0.502	2.04E-04	4.09E-04
chr1q_gain	318	11742	LumSec	C1orf61	0.823	2.04E-04	4.09E-04
chr1q_gain	318	11742	LumSec	C1orf226	0.706	2.21E-04	4.42E-04
chr1q_gain	318	11742	LumSec	RGS5	0.566	2.23E-04	4.46E-04
chr1q_gain	318	11742	LumSec	MAEL	0.668	2.24E-04	4.46E-04
chr1q_gain	318	11742	LumSec	NUCKS1	0.409	2.26E-04	4.49E-04
chr1q_gain	318	11742	LumSec	CHI3L1	0.59	2.30E-04	4.58E-04
chr1q_gain	318	11742	LumSec	MIR1182	0.382	2.39E-04	4.73E-04
chr1q_gain	318	11742	LumSec	SDCCAG8	0.335	2.40E-04	4.74E-04
chr1q_gain	318	11742	LumSec	CR2	0.543	2.51E-04	4.95E-04
chr1q_gain	318	11742	LumSec	TDRD5	0.537	2.53E-04	4.99E-04
chr1q_gain	318	11742	LumSec	COX20	0.553	2.77E-04	5.45E-04
chr1q_gain	318	11742	LumSec	ARHGAP30	0.594	2.78E-04	5.45E-04
chr1q_gain	318	11742	LumSec	ABL2	0.431	2.83E-04	5.54E-04
chr1q_gain	318	11742	LumSec	LIN9	0.561	2.85E-04	5.58E-04
chr1q_gain	318	11742	LumSec	S100A6	0.295	3.13E-04	6.11E-04
chr1q_gain	318	11742	LumSec	INTS3	0.395	3.16E-04	6.15E-04
chr1q_gain	318	11742	LumSec	ILDR2	0.527	3.20E-04	6.23E-04
chr1q_gain	318	11742	LumSec	RPS27	0.578	3.23E-04	6.28E-04
chr1q_gain	318	11742	LumSec	SMG7-AS1	0.364	3.38E-04	6.56E-04
chr1q_gain	318	11742	LumSec	SF3B4	0.804	3.42E-04	6.62E-04
chr1q_gain	318	11742	LumSec	CAMSAP2	0.553	3.58E-04	6.91E-04
chr1q_gain	318	11742	LumSec	LRRN2	0.467	3.66E-04	7.05E-04
chr1q_gain	318	11742	LumSec	CYB5R1	0.706	3.74E-04	7.19E-04
chr1q_gain	318	11742	LumSec	FLVCR1-DT	0.587	3.80E-04	7.29E-04
chr1q_gain	318	11742	LumSec	METTL18	0.545	3.83E-04	7.34E-04
chr1q_gain	318	11742	LumSec	LOC100505795	0.644	3.86E-04	7.40E-04
chr1q_gain	318	11742	LumSec	RAB13	0.565	3.96E-04	7.57E-04
chr1q_gain	318	11742	LumSec	FAM71A	0.383	4.07E-04	7.76E-04
chr1q_gain	318	11742	LumSec	SLC35F3	0.312	4.18E-04	7.97E-04
chr1q_gain	318	11742	LumSec	TPM3	0.548	4.39E-04	8.35E-04
chr1q_gain	318	11742	LumSec	MEX3A	0.532	4.73E-04	8.97E-04
chr1q_gain	318	11742	LumSec	PRDX6	0.572	4.76E-04	9.02E-04
chr1q_gain	318	11742	LumSec	CEP170	0.426	4.81E-04	9.10E-04
chr1q_gain	318	11742	LumSec	PIGC	0.359	4.85E-04	9.15E-04
chr1q_gain	318	11742	LumSec	HAPLN2	0.558	4.90E-04	9.22E-04
chr1q_gain	318	11742	LumSec	ALDH9A1	0.448	4.99E-04	9.39E-04
chr1q_gain	318	11742	LumSec	LINC01699	0.346	5.15E-04	9.67E-04
chr1q_gain	318	11742	LumSec	FCRLB	0.69	5.19E-04	9.72E-04
chr1q_gain	318	11742	LumSec	ETV3L	0.347	5.38E-04	1.01E-03
chr1q_gain	318	11742	LumSec	ADAR	0.488	5.45E-04	1.02E-03
chr1q_gain	318	11742	LumSec	NUF2	0.706	5.71E-04	1.07E-03
chr1q_gain	318	11742	LumSec	CEP350	0.339	5.88E-04	1.09E-03
chr1q_gain	318	11742	LumSec	MYOG	0.791	6.09E-04	1.13E-03
chr1q_gain	318	11742	LumSec	MTMR11	0.526	6.23E-04	1.15E-03
chr1q_gain	318	11742	LumSec	AQP10	0.583	6.42E-04	1.19E-03
chr1q_gain	318	11742	LumSec	PLEKHO1	0.564	6.65E-04	1.23E-03
chr1q_gain	318	11742	LumSec	APH1A	0.754	6.72E-04	1.24E-03
chr1q_gain	318	11742	LumSec	MSTO2P	0.847	6.84E-04	1.26E-03
chr1q_gain	318	11742	LumSec	PCP4L1	0.686	6.96E-04	1.28E-03
chr1q_gain	318	11742	LumSec	PEA15	0.715	7.14E-04	1.31E-03
chr1q_gain	318	11742	LumSec	LEFTY2	0.65	7.40E-04	1.36E-03
chr1q_gain	318	11742	LumSec	MIR1537	0.477	7.54E-04	1.38E-03
chr1q_gain	318	11742	LumSec	MIR4427	0.465	7.83E-04	1.43E-03
chr1q_gain	318	11742	LumSec	ASPM	0.561	7.87E-04	1.43E-03

chr1q_gain	318	11742	LumSec	GLMP	0.743	7.95E-04	1.45E-03
chr1q_gain	318	11742	LumSec	NBPF13P	0.67	8.10E-04	1.47E-03
chr1q_gain	318	11742	LumSec	PTGS2	0.323	8.24E-04	1.49E-03
chr1q_gain	318	11742	LumSec	FLVCR1	0.643	8.35E-04	1.51E-03
chr1q_gain	318	11742	LumSec	ITLN2	0.524	8.36E-04	1.51E-03
chr1q_gain	318	11742	LumSec	HMCN1	0.32	8.52E-04	1.54E-03
chr1q_gain	318	11742	LumSec	C1orf35	0.377	8.65E-04	1.56E-03
chr1q_gain	318	11742	LumSec	MIR29C	0.496	9.36E-04	1.68E-03
chr1q_gain	318	11742	LumSec	IFI16	0.466	9.44E-04	1.69E-03
chr1q_gain	318	11742	LumSec	C1orf112	0.489	9.67E-04	1.73E-03
chr1q_gain	318	11742	LumSec	EEF1AKNMT	0.41	9.82E-04	1.76E-03
chr1q_gain	318	11742	LumSec	RNPEP	0.473	9.83E-04	1.76E-03
chr1q_gain	318	11742	LumSec	FAM72A	0.776	9.86E-04	1.76E-03
chr1q_gain	318	11742	LumSec	BLZF1	0.693	9.93E-04	1.77E-03
chr1q_gain	318	11742	LumSec	MIR4753	0.762	1.00E-03	1.78E-03
chr1q_gain	318	11742	LumSec	GPR161	0.448	1.04E-03	1.84E-03
chr1q_gain	318	11742	LumSec	HHIPL2	0.251	1.04E-03	1.84E-03
chr1q_gain	318	11742	LumSec	TNFSF18	0.483	1.07E-03	1.89E-03
chr1q_gain	318	11742	LumSec	SPRR2D	1.502	1.10E-03	1.95E-03
chr1q_gain	318	11742	LumSec	KLHL12	0.454	1.17E-03	2.05E-03
chr1q_gain	318	11742	LumSec	SPATA46	0.786	1.25E-03	2.20E-03
chr1q_gain	318	11742	LumSec	FCGR2C	2.009	1.28E-03	2.25E-03
chr1q_gain	318	11742	LumSec	PM20D1	0.572	1.29E-03	2.27E-03
chr1q_gain	318	11742	LumSec	MPZ	0.498	1.34E-03	2.35E-03
chr1q_gain	318	11742	LumSec	RBM34	0.512	1.42E-03	2.48E-03
chr1q_gain	318	11742	LumSec	MRPL55	0.505	1.50E-03	2.63E-03
chr1q_gain	318	11742	LumSec	UBE2Q1	0.424	1.56E-03	2.71E-03
chr1q_gain	318	11742	LumSec	ZNF678	0.442	1.58E-03	2.76E-03
chr1q_gain	318	11742	LumSec	LINC00862	0.446	1.61E-03	2.80E-03
chr1q_gain	318	11742	LumSec	ANXA9	0.611	1.67E-03	2.89E-03
chr1q_gain	318	11742	LumSec	S100A7	0.311	1.68E-03	2.91E-03
chr1q_gain	318	11742	LumSec	UTP25	0.517	1.75E-03	3.02E-03
chr1q_gain	318	11742	LumSec	RALGPS2	0.42	1.86E-03	3.20E-03
chr1q_gain	318	11742	LumSec	TAGLN2	0.326	1.86E-03	3.21E-03
chr1q_gain	318	11742	LumSec	TNFAIP8L2-SCNM1	0.458	1.98E-03	3.39E-03
chr1q_gain	318	11742	LumSec	TMEM79	0.61	1.98E-03	3.39E-03
chr1q_gain	318	11742	LumSec	HSD17B7	0.732	2.00E-03	3.42E-03
chr1q_gain	318	11742	LumSec	ACBD6	0.365	2.06E-03	3.53E-03
chr1q_gain	318	11742	LumSec	LOC149373	0.802	2.13E-03	3.64E-03
chr1q_gain	318	11742	LumSec	MIR3121	0.336	2.15E-03	3.67E-03
chr1q_gain	318	11742	LumSec	CHRM3	0.253	2.33E-03	3.96E-03
chr1q_gain	318	11742	LumSec	ZNF670-ZNF695	0.521	2.36E-03	4.01E-03
chr1q_gain	318	11742	LumSec	GNG4	0.212	2.39E-03	4.05E-03
chr1q_gain	318	11742	LumSec	TNR	0.112	2.47E-03	4.18E-03
chr1q_gain	318	11742	LumSec	MAP3K21	0.231	2.49E-03	4.22E-03
chr1q_gain	318	11742	LumSec	RAB29	0.797	2.50E-03	4.22E-03
chr1q_gain	318	11742	LumSec	OPTC	0.489	2.53E-03	4.27E-03
chr1q_gain	318	11742	LumSec	PDIA3P1	0.551	2.55E-03	4.29E-03
chr1q_gain	318	11742	LumSec	PI4KB	0.317	2.59E-03	4.36E-03
chr1q_gain	318	11742	LumSec	KCNJ9	0.532	2.60E-03	4.37E-03
chr1q_gain	318	11742	LumSec	CHML	0.511	2.62E-03	4.40E-03
chr1q_gain	318	11742	LumSec	PRKAB2	0.528	2.66E-03	4.45E-03
chr1q_gain	318	11742	LumSec	COA6	0.706	2.73E-03	4.56E-03
chr1q_gain	318	11742	LumSec	PTPN7	0.507	2.73E-03	4.56E-03
chr1q_gain	318	11742	LumSec	VAMP4	0.506	2.87E-03	4.78E-03
chr1q_gain	318	11742	LumSec	REN	0.425	3.00E-03	4.98E-03
chr1q_gain	318	11742	LumSec	LOC728989	0.399	3.24E-03	5.38E-03
chr1q_gain	318	11742	LumSec	LINC01743	0.794	3.25E-03	5.38E-03
chr1q_gain	318	11742	LumSec	NPL	0.314	3.27E-03	5.42E-03

chr1q_gain	318	11742	LumSec	ZNF496	0.441	3.33E-03	5.51E-03
chr1q_gain	318	11742	LumSec	SPRR3	1.632	3.38E-03	5.57E-03
chr1q_gain	318	11742	LumSec	SLC30A10	0.239	3.38E-03	5.57E-03
chr1q_gain	318	11742	LumSec	ANKRD34A	0.47	3.56E-03	5.86E-03
chr1q_gain	318	11742	LumSec	GJA5	0.534	3.74E-03	6.15E-03
chr1q_gain	318	11742	LumSec	ACP6	0.384	3.79E-03	6.22E-03
chr1q_gain	318	11742	LumSec	PRPF3	0.442	3.87E-03	6.33E-03
chr1q_gain	318	11742	LumSec	AXDND1	0.47	4.21E-03	6.89E-03
chr1q_gain	318	11742	LumSec	RAB3GAP2	0.445	4.35E-03	7.11E-03
chr1q_gain	318	11742	LumSec	WDR64	0.21	4.46E-03	7.27E-03
chr1q_gain	318	11742	LumSec	CNIH4	0.389	4.51E-03	7.35E-03
chr1q_gain	318	11742	LumSec	SDHC	0.596	4.55E-03	7.40E-03
chr1q_gain	318	11742	LumSec	FAM177B	0.379	4.67E-03	7.58E-03
chr1q_gain	318	11742	LumSec	RNF187	0.283	4.70E-03	7.62E-03
chr1q_gain	318	11742	LumSec	EPHX1	0.355	4.72E-03	7.63E-03
chr1q_gain	318	11742	LumSec	GNPAT	0.515	4.82E-03	7.78E-03
chr1q_gain	318	11742	LumSec	TAF1A	0.542	4.87E-03	7.86E-03
chr1q_gain	318	11742	LumSec	MYBPH	0.718	4.91E-03	7.89E-03
chr1q_gain	318	11742	LumSec	KIF14	0.337	4.91E-03	7.89E-03
chr1q_gain	318	11742	LumSec	RNF2	0.649	5.06E-03	8.12E-03
chr1q_gain	318	11742	LumSec	C1orf220	0.422	5.34E-03	8.56E-03
chr1q_gain	318	11742	LumSec	B4GALT3	0.491	5.39E-03	8.63E-03
chr1q_gain	318	11742	LumSec	CD1D	0.363	5.90E-03	9.44E-03
chr1q_gain	318	11742	LumSec	GLRX2	0.531	6.09E-03	9.72E-03
chr1q_gain	318	11742	LumSec	SMYD2	0.408	6.25E-03	9.96E-03
chr1q_gain	318	11742	LumSec	OBSCN-AS1	0.331	6.26E-03	9.96E-03
chr1q_gain	318	11742	LumSec	C4BPA	0.674	6.38E-03	1.01E-02
chr1q_gain	318	11742	LumSec	ILF2	0.295	6.50E-03	1.03E-02
chr1q_gain	318	11742	LumSec	ADCY10	0.259	7.16E-03	1.13E-02
chr1q_gain	318	11742	LumSec	BOLA1	0.527	7.51E-03	1.19E-02
chr1q_gain	318	11742	LumSec	KCNH1	0.158	7.64E-03	1.20E-02
chr1q_gain	318	11742	LumSec	CA14	0.397	7.92E-03	1.25E-02
chr1q_gain	318	11742	LumSec	NR1I3	0.789	7.94E-03	1.25E-02
chr1q_gain	318	11742	LumSec	DDR2	0.521	8.03E-03	1.26E-02
chr1q_gain	318	11742	LumSec	LIX1L	0.355	8.25E-03	1.29E-02
chr1q_gain	318	11742	LumSec	CR1	0.201	8.38E-03	1.31E-02
chr1q_gain	318	11742	LumSec	CRYZL2P	0.472	8.59E-03	1.34E-02
chr1q_gain	318	11742	LumSec	LINC02591	0.36	8.69E-03	1.36E-02
chr1q_gain	318	11742	LumSec	KIF21B	0.291	8.77E-03	1.37E-02
chr1q_gain	318	11742	LumSec	1-Mar	0.618	8.93E-03	1.39E-02
chr1q_gain	318	11742	LumSec	POLR3C	0.591	9.00E-03	1.40E-02
chr1q_gain	318	11742	LumSec	SV2A	0.654	9.09E-03	1.41E-02
chr1q_gain	318	11742	LumSec	VHLL	0.913	9.47E-03	1.47E-02
chr1q_gain	318	11742	LumSec	TSTD1	0.351	9.48E-03	1.47E-02
chr1q_gain	318	11742	LumSec	ITGA10	0.405	9.75E-03	1.51E-02
chr1q_gain	318	11742	LumSec	HSPA7	0.671	1.01E-02	1.55E-02
chr1q_gain	318	11742	LumSec	AVPR1B	0.662	1.02E-02	1.57E-02
chr1q_gain	318	11742	LumSec	FMO5	0.896	1.03E-02	1.58E-02
chr1q_gain	318	11742	LumSec	SOAT1	0.459	1.04E-02	1.60E-02
chr1q_gain	318	11742	LumSec	WDR26	0.204	1.05E-02	1.61E-02
chr1q_gain	318	11742	LumSec	KIF26B	0.281	1.09E-02	1.68E-02
chr1q_gain	318	11742	LumSec	MIR3916	0.452	1.13E-02	1.73E-02
chr1q_gain	318	11742	LumSec	SLC41A1	0.3	1.13E-02	1.73E-02
chr1q_gain	318	11742	LumSec	PTPRVP	0.561	1.14E-02	1.74E-02
chr1q_gain	318	11742	LumSec	NTRK1	0.296	1.15E-02	1.75E-02
chr1q_gain	318	11742	LumSec	SLAMF8	0.461	1.23E-02	1.88E-02
chr1q_gain	318	11742	LumSec	PRSS38	0.182	1.29E-02	1.96E-02
chr1q_gain	318	11742	LumSec	LAX1	0.395	1.41E-02	2.14E-02
chr1q_gain	318	11742	LumSec	IGSF9	0.299	1.47E-02	2.23E-02

chr1q_gain	318	11742	LumSec	SLAMF7	0.693	1.51E-02	2.29E-02
chr1q_gain	318	11742	LumSec	PRCC	0.323	1.57E-02	2.37E-02
chr1q_gain	318	11742	LumSec	KCNK2	0.459	1.59E-02	2.40E-02
chr1q_gain	318	11742	LumSec	POGK	0.192	1.68E-02	2.53E-02
chr1q_gain	318	11742	LumSec	PRRX1	0.302	1.69E-02	2.54E-02
chr1q_gain	318	11742	LumSec	LMOD1	0.544	1.71E-02	2.57E-02
chr1q_gain	318	11742	LumSec	PIGM	0.367	1.72E-02	2.57E-02
chr1q_gain	318	11742	LumSec	SH2D2A	0.415	1.88E-02	2.81E-02
chr1q_gain	318	11742	LumSec	MYOC	0.303	1.89E-02	2.83E-02
chr1q_gain	318	11742	LumSec	MIR320B2	0.375	1.91E-02	2.85E-02
chr1q_gain	318	11742	LumSec	IKBKE	0.4	1.94E-02	2.90E-02
chr1q_gain	318	11742	LumSec	CTSE	0.536	1.97E-02	2.93E-02
chr1q_gain	318	11742	LumSec	MIR557	0.332	1.97E-02	2.94E-02
chr1q_gain	318	11742	LumSec	COP1	0.32	2.02E-02	3.00E-02
chr1q_gain	318	11742	LumSec	ZNF670	0.476	2.19E-02	3.24E-02
chr1q_gain	318	11742	LumSec	LINC01704	0.346	2.19E-02	3.25E-02
chr1q_gain	318	11742	LumSec	NCSTN	0.442	2.20E-02	3.25E-02
chr1q_gain	318	11742	LumSec	GAS5-AS1	0.468	2.32E-02	3.43E-02
chr1q_gain	318	11742	LumSec	LHX9	0.525	2.35E-02	3.46E-02
chr1q_gain	318	11742	LumSec	ANKRD35	0.205	2.46E-02	3.61E-02
chr1q_gain	318	11742	LumSec	TSNAX	0.472	2.51E-02	3.68E-02
chr1q_gain	318	11742	LumSec	CASQ1	0.324	2.51E-02	3.68E-02
chr1q_gain	318	11742	LumSec	B3GALT2	0.282	2.56E-02	3.75E-02
chr1q_gain	318	11742	LumSec	LYPLAL1	0.402	2.66E-02	3.89E-02
chr1q_gain	318	11742	LumSec	RPL31P11	0.777	2.72E-02	3.98E-02
chr1q_gain	318	11742	LumSec	HEATR1	0.37	2.75E-02	4.02E-02
chr1q_gain	318	11742	LumSec	LINC00626	0.293	2.76E-02	4.03E-02
chr1q_gain	318	11742	LumSec	CCSAP	0.366	2.77E-02	4.03E-02
chr1q_gain	318	11742	LumSec	RHBG	0.532	2.79E-02	4.06E-02
chr1q_gain	318	11742	LumSec	ZNF695	0.503	2.85E-02	4.14E-02
chr1q_gain	318	11742	LumSec	INSRR	0.379	2.94E-02	4.27E-02
chr1q_gain	318	11742	LumSec	RBM8A	0.222	2.95E-02	4.27E-02
chr1q_gain	318	11742	LumSec	TRIM67	0.374	2.98E-02	4.30E-02
chr1q_gain	318	11742	LumSec	LOC148709	0.575	2.99E-02	4.31E-02
chr1q_gain	318	11742	LumSec	ANGEL2	0.422	3.15E-02	4.54E-02
chr1q_gain	318	11742	LumSec	LINC01133	0.165	3.38E-02	4.86E-02
chr1q_gain	41	6599	LumHR	EEF1AKNMT	0.996	1.44E-08	1.04E-05
chr1q_gain	41	6599	LumHR	F11R	1.017	1.96E-08	1.04E-05
chr1q_gain	41	6599	LumHR	RD3	1.036	1.17E-07	4.15E-05
chr1q_gain	41	6599	LumHR	PHLDA3	0.982	2.61E-07	6.11E-05
chr1q_gain	41	6599	LumHR	KCNJ9	1.462	3.62E-07	6.11E-05
chr1q_gain	41	6599	LumHR	EFCAB2	0.89	3.85E-07	6.11E-05
chr1q_gain	41	6599	LumHR	CFAP126	0.912	4.72E-07	6.11E-05
chr1q_gain	41	6599	LumHR	MDM4	0.814	4.96E-07	6.11E-05
chr1q_gain	41	6599	LumHR	ETV3L	1.055	5.15E-07	6.11E-05
chr1q_gain	41	6599	LumHR	CAPN8	0.85	5.83E-07	6.23E-05
chr1q_gain	41	6599	LumHR	BCL9	1.102	8.82E-07	8.56E-05
chr1q_gain	41	6599	LumHR	COX20	1.05	1.03E-06	9.16E-05
chr1q_gain	41	6599	LumHR	COP1	1.046	1.36E-06	1.10E-04
chr1q_gain	41	6599	LumHR	NBPF20	0.581	1.54E-06	1.10E-04
chr1q_gain	41	6599	LumHR	NBPF10	0.581	1.54E-06	1.10E-04
chr1q_gain	41	6599	LumHR	KIAA0040	0.921	1.70E-06	1.14E-04
chr1q_gain	41	6599	LumHR	NBPF13P	1.45	1.91E-06	1.20E-04
chr1q_gain	41	6599	LumHR	RIT1	1.055	2.15E-06	1.27E-04
chr1q_gain	41	6599	LumHR	RC3H1	1.019	2.35E-06	1.32E-04
chr1q_gain	41	6599	LumHR	EFNA4	1.108	3.26E-06	1.71E-04
chr1q_gain	41	6599	LumHR	LIX1L	0.824	3.36E-06	1.71E-04
chr1q_gain	41	6599	LumHR	C1orf53	1.196	4.46E-06	2.09E-04
chr1q_gain	41	6599	LumHR	ENSA	0.738	4.51E-06	2.09E-04

chr1q_gain	41	6599	LumHR	MIA3	0.925	5.23E-06	2.33E-04
chr1q_gain	41	6599	LumHR	ETV3	1.1	5.77E-06	2.33E-04
chr1q_gain	41	6599	LumHR	PRPF3	1.005	5.90E-06	2.33E-04
chr1q_gain	41	6599	LumHR	CCT3	1.143	6.05E-06	2.33E-04
chr1q_gain	41	6599	LumHR	CACYBP	0.953	6.11E-06	2.33E-04
chr1q_gain	41	6599	LumHR	KDM5B	0.975	7.13E-06	2.62E-04
chr1q_gain	41	6599	LumHR	LOC148696	0.823	8.36E-06	2.90E-04
chr1q_gain	41	6599	LumHR	EDARADD	1.224	8.48E-06	2.90E-04
chr1q_gain	41	6599	LumHR	C1orf74	1.493	8.68E-06	2.90E-04
chr1q_gain	41	6599	LumHR	NUDT17	1.515	1.11E-05	3.53E-04
chr1q_gain	41	6599	LumHR	GLUL	1.155	1.12E-05	3.53E-04
chr1q_gain	41	6599	LumHR	RNF187	0.777	1.24E-05	3.79E-04
chr1q_gain	41	6599	LumHR	EIF2D	1.323	1.37E-05	4.07E-04
chr1q_gain	41	6599	LumHR	PCAT6	1.014	1.65E-05	4.68E-04
chr1q_gain	41	6599	LumHR	RNF2	0.902	1.66E-05	4.68E-04
chr1q_gain	41	6599	LumHR	SNRPE	0.98	1.72E-05	4.71E-04
chr1q_gain	41	6599	LumHR	TAF5L	0.733	2.10E-05	5.41E-04
chr1q_gain	41	6599	LumHR	NTPCR	1.186	2.12E-05	5.41E-04
chr1q_gain	41	6599	LumHR	SH3BP5L	0.822	2.24E-05	5.41E-04
chr1q_gain	41	6599	LumHR	KIF26B	0.63	2.26E-05	5.41E-04
chr1q_gain	41	6599	LumHR	IGSF8	0.736	2.26E-05	5.41E-04
chr1q_gain	41	6599	LumHR	SMYD3	0.865	2.28E-05	5.41E-04
chr1q_gain	41	6599	LumHR	IRF6	0.905	2.60E-05	6.05E-04
chr1q_gain	41	6599	LumHR	NID1	0.653	2.70E-05	6.13E-04
chr1q_gain	41	6599	LumHR	CHML	0.998	2.83E-05	6.30E-04
chr1q_gain	41	6599	LumHR	MIR3124	0.961	2.97E-05	6.48E-04
chr1q_gain	41	6599	LumHR	CELF3	1.473	3.08E-05	6.57E-04
chr1q_gain	41	6599	LumHR	CD34	0.694	3.61E-05	7.56E-04
chr1q_gain	41	6599	LumHR	DESI2	0.894	4.21E-05	8.65E-04
chr1q_gain	41	6599	LumHR	TSACC	1.2	4.77E-05	9.61E-04
chr1q_gain	41	6599	LumHR	VPS72	1	5.42E-05	1.07E-03
chr1q_gain	41	6599	LumHR	PFKFB2	0.735	5.91E-05	1.15E-03
chr1q_gain	41	6599	LumHR	ATP1A4	1.306	6.13E-05	1.17E-03
chr1q_gain	41	6599	LumHR	NAV1	0.571	6.32E-05	1.18E-03
chr1q_gain	41	6599	LumHR	RIIAD1	0.918	6.45E-05	1.19E-03
chr1q_gain	41	6599	LumHR	VAMP4	1.074	6.63E-05	1.20E-03
chr1q_gain	41	6599	LumHR	ANKRD34A	0.771	7.39E-05	1.31E-03
chr1q_gain	41	6599	LumHR	SRP9	0.676	7.72E-05	1.34E-03
chr1q_gain	41	6599	LumHR	LRRN2	0.951	7.82E-05	1.34E-03
chr1q_gain	41	6599	LumHR	MIR4427	0.703	7.91E-05	1.34E-03
chr1q_gain	41	6599	LumHR	SCYL3	0.853	8.34E-05	1.39E-03
chr1q_gain	41	6599	LumHR	SDE2	1.042	8.44E-05	1.39E-03
chr1q_gain	41	6599	LumHR	STX6	0.876	8.56E-05	1.39E-03
chr1q_gain	41	6599	LumHR	YOD1	0.807	8.69E-05	1.39E-03
chr1q_gain	41	6599	LumHR	C2CD4D-AS1	0.917	9.01E-05	1.42E-03
chr1q_gain	41	6599	LumHR	YY1AP1	0.677	9.63E-05	1.49E-03
chr1q_gain	41	6599	LumHR	RBM8A	1.01	9.85E-05	1.50E-03
chr1q_gain	41	6599	LumHR	SETDB1	0.75	9.99E-05	1.50E-03
chr1q_gain	41	6599	LumHR	TRIM11	0.766	1.10E-04	1.63E-03
chr1q_gain	41	6599	LumHR	CHIT1	0.692	1.18E-04	1.73E-03
chr1q_gain	41	6599	LumHR	SERTAD4-AS1	0.673	1.21E-04	1.75E-03
chr1q_gain	41	6599	LumHR	ELF3	0.577	1.23E-04	1.75E-03
chr1q_gain	41	6599	LumHR	ADAM15	0.81	1.26E-04	1.76E-03
chr1q_gain	41	6599	LumHR	TXNIP	0.854	1.27E-04	1.76E-03
chr1q_gain	41	6599	LumHR	SUCO	0.722	1.31E-04	1.79E-03
chr1q_gain	41	6599	LumHR	MGAT4EP	1.269	1.34E-04	1.81E-03
chr1q_gain	41	6599	LumHR	C1orf21	0.557	1.48E-04	1.97E-03
chr1q_gain	41	6599	LumHR	FMO2	0.972	1.56E-04	2.06E-03
chr1q_gain	41	6599	LumHR	APH1A	0.941	1.58E-04	2.06E-03

chr1q_gain	41	6599	LumHR	PRCC	0.57	1.69E-04	2.17E-03
chr1q_gain	41	6599	LumHR	MTMR11	0.962	1.85E-04	2.35E-03
chr1q_gain	41	6599	LumHR	PDZK1	1.156	2.04E-04	2.56E-03
chr1q_gain	41	6599	LumHR	KCNH1	0.447	2.13E-04	2.65E-03
chr1q_gain	41	6599	LumHR	SCCPDH	0.75	2.16E-04	2.65E-03
chr1q_gain	41	6599	LumHR	HNRNPU	0.637	2.31E-04	2.80E-03
chr1q_gain	41	6599	LumHR	DCST1-AS1	0.773	2.39E-04	2.83E-03
chr1q_gain	41	6599	LumHR	CAPN2	0.685	2.39E-04	2.83E-03
chr1q_gain	41	6599	LumHR	ODR4	0.643	2.44E-04	2.86E-03
chr1q_gain	41	6599	LumHR	TMEM63A	0.615	2.51E-04	2.90E-03
chr1q_gain	41	6599	LumHR	ANGEL2	1.406	2.52E-04	2.90E-03
chr1q_gain	41	6599	LumHR	C1orf112	0.963	2.61E-04	2.95E-03
chr1q_gain	41	6599	LumHR	CRTC2	0.645	2.62E-04	2.95E-03
chr1q_gain	41	6599	LumHR	DISC1	0.68	2.71E-04	3.02E-03
chr1q_gain	41	6599	LumHR	TOMM20	0.867	2.95E-04	3.24E-03
chr1q_gain	41	6599	LumHR	FDP5	0.676	3.02E-04	3.29E-03
chr1q_gain	41	6599	LumHR	PRRX1	0.84	3.15E-04	3.39E-03
chr1q_gain	41	6599	LumHR	TATDN3	1.094	3.19E-04	3.41E-03
chr1q_gain	41	6599	LumHR	PIP5K1A	0.785	3.30E-04	3.48E-03
chr1q_gain	41	6599	LumHR	SLC39A1	0.677	3.35E-04	3.48E-03
chr1q_gain	41	6599	LumHR	TTC13	0.912	3.35E-04	3.48E-03
chr1q_gain	41	6599	LumHR	SLC30A10	0.426	3.53E-04	3.62E-03
chr1q_gain	41	6599	LumHR	LINGO4	2.162	3.65E-04	3.71E-03
chr1q_gain	41	6599	LumHR	C2CD4D	0.897	3.72E-04	3.72E-03
chr1q_gain	41	6599	LumHR	GON4L	0.631	3.73E-04	3.72E-03
chr1q_gain	41	6599	LumHR	SLC45A3	0.685	3.83E-04	3.76E-03
chr1q_gain	41	6599	LumHR	PSEN2	0.84	3.92E-04	3.76E-03
chr1q_gain	41	6599	LumHR	CCDC190	1.183	3.92E-04	3.76E-03
chr1q_gain	41	6599	LumHR	SELE	1.955	3.92E-04	3.76E-03
chr1q_gain	41	6599	LumHR	TSNAX-DISC1	0.634	3.95E-04	3.76E-03
chr1q_gain	41	6599	LumHR	IL6R	0.68	4.20E-04	3.94E-03
chr1q_gain	41	6599	LumHR	SIPA1L2	0.445	4.21E-04	3.94E-03
chr1q_gain	41	6599	LumHR	CSRP1	0.526	4.43E-04	4.11E-03
chr1q_gain	41	6599	LumHR	CREG1	0.836	4.74E-04	4.36E-03
chr1q_gain	41	6599	LumHR	LINC01686	0.728	4.78E-04	4.36E-03
chr1q_gain	41	6599	LumHR	BLZF1	0.841	4.85E-04	4.39E-03
chr1q_gain	41	6599	LumHR	ELK4	0.651	5.05E-04	4.47E-03
chr1q_gain	41	6599	LumHR	LRRC52	0.541	5.05E-04	4.47E-03
chr1q_gain	41	6599	LumHR	ACP6	0.648	5.06E-04	4.47E-03
chr1q_gain	41	6599	LumHR	VHLL	1.722	5.15E-04	4.50E-03
chr1q_gain	41	6599	LumHR	MFSD4A-AS1	0.793	5.23E-04	4.52E-03
chr1q_gain	41	6599	LumHR	FCRL6	1.097	5.25E-04	4.52E-03
chr1q_gain	41	6599	LumHR	HSPA6	0.716	5.29E-04	4.52E-03
chr1q_gain	41	6599	LumHR	RNU5F-1	0.565	5.45E-04	4.62E-03
chr1q_gain	41	6599	LumHR	CHD1L	0.452	5.53E-04	4.63E-03
chr1q_gain	41	6599	LumHR	SNX27	0.685	5.55E-04	4.63E-03
chr1q_gain	41	6599	LumHR	NOS1AP	0.495	5.69E-04	4.70E-03
chr1q_gain	41	6599	LumHR	XCL1	1.515	5.74E-04	4.70E-03
chr1q_gain	41	6599	LumHR	RAB29	1.431	5.76E-04	4.70E-03
chr1q_gain	41	6599	LumHR	TPR	0.63	6.43E-04	5.20E-03
chr1q_gain	41	6599	LumHR	S100A14	0.787	6.48E-04	5.20E-03
chr1q_gain	41	6599	LumHR	RPS10P7	0.735	6.59E-04	5.25E-03
chr1q_gain	41	6599	LumHR	DUSP5P1	0.487	6.99E-04	5.53E-03
chr1q_gain	41	6599	LumHR	PBX1	0.55	7.16E-04	5.62E-03
chr1q_gain	41	6599	LumHR	HHAT	0.722	7.38E-04	5.75E-03
chr1q_gain	41	6599	LumHR	ZNF678	0.682	7.43E-04	5.75E-03
chr1q_gain	41	6599	LumHR	ILF2	0.832	7.49E-04	5.75E-03
chr1q_gain	41	6599	LumHR	RRP15	0.781	7.66E-04	5.84E-03
chr1q_gain	41	6599	LumHR	RNASEL	0.934	7.73E-04	5.86E-03

chr1q_gain	41	6599	LumHR	CDC42BPA	0.697	8.16E-04	6.08E-03
chr1q_gain	41	6599	LumHR	VANGL2	0.868	8.18E-04	6.08E-03
chr1q_gain	41	6599	LumHR	DYRK3	0.518	8.19E-04	6.08E-03
chr1q_gain	41	6599	LumHR	LAMTOR2	0.66	8.33E-04	6.14E-03
chr1q_gain	41	6599	LumHR	IPO9	0.742	8.63E-04	6.32E-03
chr1q_gain	41	6599	LumHR	OR1411	1.594	9.07E-04	6.56E-03
chr1q_gain	41	6599	LumHR	MIR190B	0.492	9.11E-04	6.56E-03
chr1q_gain	41	6599	LumHR	PGBD2	0.809	9.15E-04	6.56E-03
chr1q_gain	41	6599	LumHR	FCGR2C	1.856	9.24E-04	6.58E-03
chr1q_gain	41	6599	LumHR	C1orf115	1.267	1.02E-03	7.07E-03
chr1q_gain	41	6599	LumHR	MIR205	0.867	1.02E-03	7.07E-03
chr1q_gain	41	6599	LumHR	LEFTY1	0.478	1.02E-03	7.07E-03
chr1q_gain	41	6599	LumHR	ZNF670-ZNF695	0.666	1.02E-03	7.07E-03
chr1q_gain	41	6599	LumHR	MYBPH	0.88	1.03E-03	7.07E-03
chr1q_gain	41	6599	LumHR	QSOX1	0.644	1.03E-03	7.07E-03
chr1q_gain	41	6599	LumHR	DCAF8	0.766	1.07E-03	7.25E-03
chr1q_gain	41	6599	LumHR	ZNF496	0.527	1.09E-03	7.38E-03
chr1q_gain	41	6599	LumHR	ZBTB37	0.623	1.11E-03	7.42E-03
chr1q_gain	41	6599	LumHR	ESRRG	0.608	1.12E-03	7.46E-03
chr1q_gain	41	6599	LumHR	S100A16	0.547	1.16E-03	7.68E-03
chr1q_gain	41	6599	LumHR	LGALS8	0.665	1.17E-03	7.68E-03
chr1q_gain	41	6599	LumHR	POLR3GL	0.742	1.17E-03	7.68E-03
chr1q_gain	41	6599	LumHR	FCGR3A	0.7	1.20E-03	7.78E-03
chr1q_gain	41	6599	LumHR	ARHGEF11	0.703	1.23E-03	7.99E-03
chr1q_gain	41	6599	LumHR	NME7	0.603	1.29E-03	8.29E-03
chr1q_gain	41	6599	LumHR	ZNF648	0.641	1.31E-03	8.35E-03
chr1q_gain	41	6599	LumHR	EFNA3	0.645	1.43E-03	9.09E-03
chr1q_gain	41	6599	LumHR	PAQR6	1.464	1.46E-03	9.20E-03
chr1q_gain	41	6599	LumHR	SLC41A1	0.599	1.47E-03	9.25E-03
chr1q_gain	41	6599	LumHR	ITGA10	0.52	1.49E-03	9.28E-03
chr1q_gain	41	6599	LumHR	CREB3L4	0.646	1.50E-03	9.28E-03
chr1q_gain	41	6599	LumHR	RGS16	0.631	1.50E-03	9.28E-03
chr1q_gain	41	6599	LumHR	KCNK1	0.855	1.52E-03	9.31E-03
chr1q_gain	41	6599	LumHR	UCHL5	0.632	1.56E-03	9.54E-03
chr1q_gain	41	6599	LumHR	TP53BP2	0.585	1.58E-03	9.54E-03
chr1q_gain	41	6599	LumHR	DCST1	0.499	1.58E-03	9.54E-03
chr1q_gain	41	6599	LumHR	SF3B4	1.085	1.59E-03	9.54E-03
chr1q_gain	41	6599	LumHR	LOC100506023	0.436	1.64E-03	9.77E-03
chr1q_gain	41	6599	LumHR	NEK7	0.642	1.78E-03	1.04E-02
chr1q_gain	41	6599	LumHR	NPR1	1.12	1.78E-03	1.04E-02
chr1q_gain	41	6599	LumHR	TOR3A	0.642	1.79E-03	1.04E-02
chr1q_gain	41	6599	LumHR	RABGAP1L	0.465	1.80E-03	1.04E-02
chr1q_gain	41	6599	LumHR	SNORD81	0.609	1.80E-03	1.04E-02
chr1q_gain	41	6599	LumHR	ACTA1	0.294	1.81E-03	1.04E-02
chr1q_gain	41	6599	LumHR	ADAR	0.685	1.84E-03	1.06E-02
chr1q_gain	41	6599	LumHR	CDC73	0.696	1.86E-03	1.06E-02
chr1q_gain	41	6599	LumHR	GPATCH2	0.493	1.88E-03	1.06E-02
chr1q_gain	41	6599	LumHR	MIR29C	0.863	1.88E-03	1.06E-02
chr1q_gain	41	6599	LumHR	LINC01136	0.493	1.88E-03	1.06E-02
chr1q_gain	41	6599	LumHR	GLRX2	0.495	1.92E-03	1.07E-02
chr1q_gain	41	6599	LumHR	SNORD47	0.605	1.93E-03	1.07E-02
chr1q_gain	41	6599	LumHR	JTB	1.053	2.06E-03	1.13E-02
chr1q_gain	41	6599	LumHR	SNORD80	0.599	2.06E-03	1.13E-02
chr1q_gain	41	6599	LumHR	SNORD79	0.598	2.06E-03	1.13E-02
chr1q_gain	41	6599	LumHR	CATSPERE	0.426	2.10E-03	1.14E-02
chr1q_gain	41	6599	LumHR	LINC00467	0.545	2.15E-03	1.17E-02
chr1q_gain	41	6599	LumHR	PRUNE1	0.646	2.18E-03	1.17E-02
chr1q_gain	41	6599	LumHR	LAD1	0.545	2.19E-03	1.17E-02
chr1q_gain	41	6599	LumHR	RORC	0.596	2.22E-03	1.19E-02

chr1q_gain	41	6599	LumHR	SHISA4	0.64	2.25E-03	1.19E-02
chr1q_gain	41	6599	LumHR	NEK2	0.632	2.27E-03	1.19E-02
chr1q_gain	41	6599	LumHR	OPN3	0.582	2.28E-03	1.19E-02
chr1q_gain	41	6599	LumHR	GAS5	0.588	2.28E-03	1.19E-02
chr1q_gain	41	6599	LumHR	SERTAD4	0.659	2.29E-03	1.19E-02
chr1q_gain	41	6599	LumHR	C4BPB	0.21	2.30E-03	1.19E-02
chr1q_gain	41	6599	LumHR	CRYZL2P	0.52	2.42E-03	1.25E-02
chr1q_gain	41	6599	LumHR	PMF1-BGLAP	0.579	2.43E-03	1.25E-02
chr1q_gain	41	6599	LumHR	DDR2	0.381	2.44E-03	1.25E-02
chr1q_gain	41	6599	LumHR	ETNK2	0.343	2.50E-03	1.27E-02
chr1q_gain	41	6599	LumHR	LBR	0.633	2.59E-03	1.31E-02
chr1q_gain	41	6599	LumHR	UHMK1	1.138	2.60E-03	1.31E-02
chr1q_gain	41	6599	LumHR	SNORD74	0.589	2.61E-03	1.31E-02
chr1q_gain	41	6599	LumHR	AHCTF1	0.709	2.62E-03	1.31E-02
chr1q_gain	41	6599	LumHR	RCOR3	0.437	2.65E-03	1.31E-02
chr1q_gain	41	6599	LumHR	SLC27A3	0.57	2.66E-03	1.31E-02
chr1q_gain	41	6599	LumHR	TLR5	0.525	2.67E-03	1.31E-02
chr1q_gain	41	6599	LumHR	PARP1	0.81	2.73E-03	1.34E-02
chr1q_gain	41	6599	LumHR	HEATR1	0.5	2.75E-03	1.34E-02
chr1q_gain	41	6599	LumHR	LOC100505918	0.356	2.77E-03	1.34E-02
chr1q_gain	41	6599	LumHR	UBQLN4	0.602	2.78E-03	1.34E-02
chr1q_gain	41	6599	LumHR	TFB2M	0.686	2.83E-03	1.36E-02
chr1q_gain	41	6599	LumHR	MIR1231	1.274	2.84E-03	1.36E-02
chr1q_gain	41	6599	LumHR	GLMP	1.243	2.90E-03	1.38E-02
chr1q_gain	41	6599	LumHR	KMO	0.626	2.92E-03	1.38E-02
chr1q_gain	41	6599	LumHR	CNST	0.37	3.01E-03	1.41E-02
chr1q_gain	41	6599	LumHR	SMYD2	0.241	3.01E-03	1.41E-02
chr1q_gain	41	6599	LumHR	FCGR2A	1.462	3.02E-03	1.41E-02
chr1q_gain	41	6599	LumHR	MINDY1	0.574	3.13E-03	1.46E-02
chr1q_gain	41	6599	LumHR	NENF	0.53	3.16E-03	1.46E-02
chr1q_gain	41	6599	LumHR	EXO1	0.596	3.17E-03	1.46E-02
chr1q_gain	41	6599	LumHR	ARL8A	0.791	3.20E-03	1.47E-02
chr1q_gain	41	6599	LumHR	NPHS2	0.662	3.22E-03	1.47E-02
chr1q_gain	41	6599	LumHR	KPRP	0.897	3.23E-03	1.47E-02
chr1q_gain	41	6599	LumHR	SPATA17	0.693	3.29E-03	1.50E-02
chr1q_gain	41	6599	LumHR	MIR921	0.897	3.32E-03	1.50E-02
chr1q_gain	41	6599	LumHR	RUSC1-AS1	0.464	3.40E-03	1.53E-02
chr1q_gain	41	6599	LumHR	ZNF695	0.61	3.43E-03	1.54E-02
chr1q_gain	41	6599	LumHR	BOLA1	0.569	3.47E-03	1.55E-02
chr1q_gain	41	6599	LumHR	MIR556	0.439	3.49E-03	1.55E-02
chr1q_gain	41	6599	LumHR	IRF2BP2	0.485	3.51E-03	1.55E-02
chr1q_gain	41	6599	LumHR	ZBED6	1.153	3.52E-03	1.55E-02
chr1q_gain	41	6599	LumHR	TEX35	0.488	3.55E-03	1.56E-02
chr1q_gain	41	6599	LumHR	B3GALNT2	0.581	3.55E-03	1.56E-02
chr1q_gain	41	6599	LumHR	TMCO1	0.555	3.57E-03	1.56E-02
chr1q_gain	41	6599	LumHR	SWT1	0.628	3.67E-03	1.59E-02
chr1q_gain	41	6599	LumHR	PDC	0.122	3.69E-03	1.59E-02
chr1q_gain	41	6599	LumHR	ITPKB	0.508	3.69E-03	1.59E-02
chr1q_gain	41	6599	LumHR	ERO1B	0.785	3.81E-03	1.63E-02
chr1q_gain	41	6599	LumHR	LINC00862	0.984	3.82E-03	1.63E-02
chr1q_gain	41	6599	LumHR	SELL	1.563	3.97E-03	1.69E-02
chr1q_gain	41	6599	LumHR	SNORD75	0.581	3.99E-03	1.69E-02
chr1q_gain	41	6599	LumHR	LYST	0.533	4.04E-03	1.70E-02
chr1q_gain	41	6599	LumHR	PSMD4	0.566	4.05E-03	1.70E-02
chr1q_gain	41	6599	LumHR	SNORD76	0.578	4.10E-03	1.71E-02
chr1q_gain	41	6599	LumHR	CLK2	0.485	4.11E-03	1.71E-02
chr1q_gain	41	6599	LumHR	RGS1	1.058	4.16E-03	1.72E-02
chr1q_gain	41	6599	LumHR	C1orf131	0.672	4.17E-03	1.72E-02
chr1q_gain	41	6599	LumHR	PRRC2C	0.676	4.18E-03	1.72E-02

chr1q_gain	41	6599	LumHR	MIR4654	0.493	4.20E-03	1.72E-02
chr1q_gain	41	6599	LumHR	MRPL24	0.557	4.22E-03	1.72E-02
chr1q_gain	41	6599	LumHR	TNNI1	0.298	4.22E-03	1.72E-02
chr1q_gain	41	6599	LumHR	BCAN	0.448	4.26E-03	1.73E-02
chr1q_gain	41	6599	LumHR	CAPN9	0.845	4.34E-03	1.75E-02
chr1q_gain	41	6599	LumHR	SNORD44	0.571	4.45E-03	1.79E-02
chr1q_gain	41	6599	LumHR	DUSP23	0.4	4.46E-03	1.79E-02
chr1q_gain	41	6599	LumHR	SNORD77	0.571	4.46E-03	1.79E-02
chr1q_gain	41	6599	LumHR	MIR548F1	0.273	4.59E-03	1.83E-02
chr1q_gain	41	6599	LumHR	HCN3	0.567	4.65E-03	1.84E-02
chr1q_gain	41	6599	LumHR	LMX1A	0.449	4.66E-03	1.84E-02
chr1q_gain	41	6599	LumHR	RUSC1	0.422	4.71E-03	1.85E-02
chr1q_gain	41	6599	LumHR	ZC3H11A	0.914	4.73E-03	1.86E-02
chr1q_gain	41	6599	LumHR	SNORD78	0.564	4.78E-03	1.86E-02
chr1q_gain	41	6599	LumHR	TIMM17A	0.559	4.78E-03	1.86E-02
chr1q_gain	41	6599	LumHR	RABIF	0.645	4.82E-03	1.87E-02
chr1q_gain	41	6599	LumHR	USF1	0.64	4.85E-03	1.88E-02
chr1q_gain	41	6599	LumHR	PMF1	0.545	4.88E-03	1.88E-02
chr1q_gain	41	6599	LumHR	SELENBP1	0.562	4.90E-03	1.88E-02
chr1q_gain	41	6599	LumHR	TMEM183A	0.592	4.93E-03	1.89E-02
chr1q_gain	41	6599	LumHR	RCSD1	0.304	4.97E-03	1.89E-02
chr1q_gain	41	6599	LumHR	MIR554	0.576	4.99E-03	1.89E-02
chr1q_gain	41	6599	LumHR	URB2	0.482	5.00E-03	1.89E-02
chr1q_gain	41	6599	LumHR	ENAH	0.256	5.14E-03	1.94E-02
chr1q_gain	41	6599	LumHR	LAMC1	0.308	5.22E-03	1.96E-02
chr1q_gain	41	6599	LumHR	SEC16B	0.488	5.24E-03	1.96E-02
chr1q_gain	41	6599	LumHR	GPR89B	1.006	5.27E-03	1.97E-02
chr1q_gain	41	6599	LumHR	PLEKHA6	0.44	5.45E-03	2.03E-02
chr1q_gain	41	6599	LumHR	LMNA	0.337	5.55E-03	2.06E-02
chr1q_gain	41	6599	LumHR	MIR205HG	0.75	5.58E-03	2.06E-02
chr1q_gain	41	6599	LumHR	PPP1R15B	0.533	5.64E-03	2.08E-02
chr1q_gain	41	6599	LumHR	TARS2	0.711	5.68E-03	2.08E-02
chr1q_gain	41	6599	LumHR	LCE2D	0.963	5.79E-03	2.12E-02
chr1q_gain	41	6599	LumHR	PRELP	0.602	5.81E-03	2.12E-02
chr1q_gain	41	6599	LumHR	SLC50A1	0.472	6.35E-03	2.30E-02
chr1q_gain	41	6599	LumHR	LOC148709	0.396	6.36E-03	2.30E-02
chr1q_gain	41	6599	LumHR	ARV1	0.837	6.44E-03	2.33E-02
chr1q_gain	41	6599	LumHR	FCGR1A	0.949	6.55E-03	2.36E-02
chr1q_gain	41	6599	LumHR	MYOG	0.928	6.59E-03	2.36E-02
chr1q_gain	41	6599	LumHR	EDEM3	0.636	6.67E-03	2.38E-02
chr1q_gain	41	6599	LumHR	RPRD2	0.818	6.84E-03	2.44E-02
chr1q_gain	41	6599	LumHR	SOX13	0.348	6.92E-03	2.45E-02
chr1q_gain	41	6599	LumHR	PLXNA2	0.53	6.93E-03	2.45E-02
chr1q_gain	41	6599	LumHR	RPS6KC1	0.739	6.98E-03	2.46E-02
chr1q_gain	41	6599	LumHR	C1orf35	0.825	7.00E-03	2.46E-02
chr1q_gain	41	6599	LumHR	PYCR2	0.422	7.04E-03	2.47E-02
chr1q_gain	41	6599	LumHR	EFNA1	0.452	7.35E-03	2.56E-02
chr1q_gain	41	6599	LumHR	MGST3	0.233	7.35E-03	2.56E-02
chr1q_gain	41	6599	LumHR	POU2F1	0.502	7.47E-03	2.59E-02
chr1q_gain	41	6599	LumHR	PRR9	1.096	7.56E-03	2.61E-02
chr1q_gain	41	6599	LumHR	PPFIA4	0.646	7.66E-03	2.64E-02
chr1q_gain	41	6599	LumHR	MPZL1	0.398	7.69E-03	2.64E-02
chr1q_gain	41	6599	LumHR	MRPS21	0.912	7.85E-03	2.69E-02
chr1q_gain	41	6599	LumHR	DAP3	0.579	8.00E-03	2.73E-02
chr1q_gain	41	6599	LumHR	ARPC5	0.49	8.14E-03	2.77E-02
chr1q_gain	41	6599	LumHR	S100A13	0.541	8.16E-03	2.77E-02
chr1q_gain	41	6599	LumHR	FCRL5	0.248	8.20E-03	2.77E-02
chr1q_gain	41	6599	LumHR	INTS3	0.421	8.35E-03	2.81E-02
chr1q_gain	41	6599	LumHR	FMO1	0.494	8.35E-03	2.81E-02

chr1q_gain	41	6599	LumHR	S100A11	0.501	8.38E-03	2.81E-02
chr1q_gain	41	6599	LumHR	TNR	0.275	8.46E-03	2.82E-02
chr1q_gain	41	6599	LumHR	MROH9	0.465	8.51E-03	2.83E-02
chr1q_gain	41	6599	LumHR	SLC30A1	0.502	8.73E-03	2.90E-02
chr1q_gain	41	6599	LumHR	UTP25	0.639	8.90E-03	2.94E-02
chr1q_gain	41	6599	LumHR	LINC01354	0.355	9.10E-03	3.00E-02
chr1q_gain	41	6599	LumHR	FCMR	0.315	9.53E-03	3.13E-02
chr1q_gain	41	6599	LumHR	NPL	0.586	9.67E-03	3.17E-02
chr1q_gain	41	6599	LumHR	TMOD4	1.821	9.76E-03	3.18E-02
chr1q_gain	41	6599	LumHR	GNG4	0.638	9.78E-03	3.18E-02
chr1q_gain	41	6599	LumHR	LIN9	0.433	9.84E-03	3.18E-02
chr1q_gain	41	6599	LumHR	CIART	0.327	9.84E-03	3.18E-02
chr1q_gain	41	6599	LumHR	CAMSAP2	0.831	9.85E-03	3.18E-02
chr1q_gain	41	6599	LumHR	TUFT1	0.51	9.88E-03	3.18E-02
chr1q_gain	41	6599	LumHR	METTL18	0.496	9.94E-03	3.19E-02
chr1q_gain	41	6599	LumHR	FAM20B	0.574	9.97E-03	3.19E-02
chr1q_gain	41	6599	LumHR	TRIM67	0.528	9.99E-03	3.19E-02
chr1q_gain	41	6599	LumHR	ARID4B	0.455	1.01E-02	3.21E-02
chr1q_gain	41	6599	LumHR	CERS2	0.558	1.01E-02	3.21E-02
chr1q_gain	41	6599	LumHR	TRIM17	0.688	1.02E-02	3.22E-02
chr1q_gain	41	6599	LumHR	WDR64	0.546	1.02E-02	3.22E-02
chr1q_gain	41	6599	LumHR	PAPPA2	0.149	1.02E-02	3.22E-02
chr1q_gain	41	6599	LumHR	MEF2D	0.331	1.05E-02	3.28E-02
chr1q_gain	41	6599	LumHR	XPR1	0.329	1.05E-02	3.28E-02
chr1q_gain	41	6599	LumHR	CCSAP	0.135	1.06E-02	3.30E-02
chr1q_gain	41	6599	LumHR	USH2A	0.138	1.08E-02	3.35E-02
chr1q_gain	41	6599	LumHR	TNNT2	0.595	1.12E-02	3.46E-02
chr1q_gain	41	6599	LumHR	CFAP45	0.446	1.12E-02	3.46E-02
chr1q_gain	41	6599	LumHR	OR6N1	1.441	1.12E-02	3.46E-02
chr1q_gain	41	6599	LumHR	DCST2	0.219	1.13E-02	3.46E-02
chr1q_gain	41	6599	LumHR	ATP1A2	0.611	1.13E-02	3.46E-02
chr1q_gain	41	6599	LumHR	LAMB3	0.422	1.14E-02	3.48E-02
chr1q_gain	41	6599	LumHR	G0S2	0.318	1.15E-02	3.51E-02
chr1q_gain	41	6599	LumHR	ISG20L2	0.46	1.16E-02	3.51E-02
chr1q_gain	41	6599	LumHR	REN	0.578	1.16E-02	3.52E-02
chr1q_gain	41	6599	LumHR	C1orf220	0.582	1.17E-02	3.53E-02
chr1q_gain	41	6599	LumHR	MIR5087	0.684	1.17E-02	3.53E-02
chr1q_gain	41	6599	LumHR	TADA1	0.408	1.19E-02	3.58E-02
chr1q_gain	41	6599	LumHR	LGR6	0.559	1.21E-02	3.63E-02
chr1q_gain	41	6599	LumHR	GPR161	0.703	1.22E-02	3.63E-02
chr1q_gain	41	6599	LumHR	MIR4258	0.485	1.24E-02	3.68E-02
chr1q_gain	41	6599	LumHR	CKS1B	0.485	1.24E-02	3.68E-02
chr1q_gain	41	6599	LumHR	TMEM9	0.324	1.25E-02	3.70E-02
chr1q_gain	41	6599	LumHR	COA6	0.727	1.25E-02	3.70E-02
chr1q_gain	41	6599	LumHR	DPT	0.765	1.26E-02	3.71E-02
chr1q_gain	41	6599	LumHR	ADORA1	0.543	1.27E-02	3.71E-02
chr1q_gain	41	6599	LumHR	USP21	0.492	1.27E-02	3.71E-02
chr1q_gain	41	6599	LumHR	CD46	0.342	1.29E-02	3.75E-02
chr1q_gain	41	6599	LumHR	FLVCR1	0.45	1.29E-02	3.76E-02
chr1q_gain	41	6599	LumHR	PPOX	0.488	1.30E-02	3.78E-02
chr1q_gain	41	6599	LumHR	ZBTB18	0.618	1.31E-02	3.79E-02
chr1q_gain	41	6599	LumHR	BTG2	0.438	1.32E-02	3.81E-02
chr1q_gain	41	6599	LumHR	HDGF	0.386	1.34E-02	3.87E-02
chr1q_gain	41	6599	LumHR	FAM78B	0.476	1.35E-02	3.89E-02
chr1q_gain	41	6599	LumHR	DUSP10	0.433	1.36E-02	3.89E-02
chr1q_gain	41	6599	LumHR	MRPL55	0.547	1.38E-02	3.93E-02
chr1q_gain	41	6599	LumHR	FASLG	0.116	1.38E-02	3.93E-02
chr1q_gain	41	6599	LumHR	SERPINC1	0.117	1.38E-02	3.93E-02
chr1q_gain	41	6599	LumHR	PSMB4	0.278	1.41E-02	4.00E-02

chr1q_gain	41	6599	LumHR	BPNT1	0.756	1.42E-02	4.01E-02
chr1q_gain	41	6599	LumHR	TNFSF18	0.684	1.47E-02	4.12E-02
chr1q_gain	41	6599	LumHR	COQ8A	0.69	1.47E-02	4.12E-02
chr1q_gain	41	6599	LumHR	TRMT1L	0.375	1.48E-02	4.14E-02
chr1q_gain	41	6599	LumHR	HHIPL2	0.413	1.49E-02	4.17E-02
chr1q_gain	41	6599	LumHR	RAB4A	0.385	1.50E-02	4.18E-02
chr1q_gain	41	6599	LumHR	TIPRL	0.68	1.52E-02	4.23E-02
chr1q_gain	41	6599	LumHR	RAB25	0.368	1.53E-02	4.23E-02
chr1q_gain	41	6599	LumHR	GPR137B	0.515	1.55E-02	4.30E-02
chr1q_gain	41	6599	LumHR	RGS8	0.292	1.56E-02	4.30E-02
chr1q_gain	41	6599	LumHR	RGL1	0.249	1.57E-02	4.32E-02
chr1q_gain	41	6599	LumHR	C1orf68	0.897	1.62E-02	4.44E-02
chr1q_gain	41	6599	LumHR	FMOD	0.396	1.64E-02	4.48E-02
chr1q_gain	41	6599	LumHR	OR2T27	2.251	1.64E-02	4.48E-02
chr1q_gain	41	6599	LumHR	UBE2Q1	0.584	1.66E-02	4.52E-02
chr1q_gain	41	6599	LumHR	MIR557	0.821	1.66E-02	4.52E-02
chr1q_gain	41	6599	LumHR	DUSP12	0.52	1.67E-02	4.52E-02
chr1q_gain	41	6599	LumHR	MIR3916	0.835	1.69E-02	4.57E-02
chr1q_gain	41	6599	LumHR	KCNK2	0.606	1.69E-02	4.57E-02
chr1q_gain	41	6599	LumHR	CHRNA2	0.405	1.71E-02	4.61E-02
chr1q_gain	41	6599	LumHR	TDRKH	0.417	1.75E-02	4.69E-02
chr1q_gain	41	6599	LumHR	ACBD3	0.368	1.76E-02	4.71E-02
chr1q_gain	41	6599	LumHR	MIR3658	0.531	1.77E-02	4.72E-02
chr1q_gain	41	6599	LumHR	TDRD5	0.608	1.78E-02	4.72E-02
chr1q_gain	41	6599	LumHR	IER5	0.234	1.78E-02	4.72E-02
chr1q_gain	41	6599	LumHR	C1orf43	0.363	1.79E-02	4.74E-02
chr1q_gain	41	6599	LumHR	CRABP2	0.633	1.82E-02	4.81E-02
chr1q_gain	41	6599	LumHR	PPP2R5A	0.411	1.86E-02	4.90E-02
chr1q_gain	41	6599	LumHR	IBA57	0.321	1.86E-02	4.90E-02
chr1q_gain	41	6599	LumHR	LINC01142	0.306	1.87E-02	4.92E-02
chr1q_gain	41	6599	LumHR	NVL	0.494	1.90E-02	4.96E-02
chr1q_gain	41	6599	LumHR	MIR4260	0.296	1.90E-02	4.96E-02
chr1q_gain	41	6599	LumHR	GGPS1	0.283	1.91E-02	4.97E-02
chr1q_gain	41	6599	LumHR	GABPB2	0.829	1.91E-02	4.97E-02
chr10_loss	105	11742	LumSec	SH3PXD2A	-1.042	1.14E-10	7.72E-08
chr10_loss	105	11742	LumSec	TCF7L2	-1.009	3.99E-10	1.01E-07
chr10_loss	105	11742	LumSec	ZMIZ1	-0.725	4.98E-10	1.01E-07
chr10_loss	105	11742	LumSec	CTBP2	-0.776	5.94E-10	1.01E-07
chr10_loss	105	11742	LumSec	MYOF	-0.951	1.14E-09	1.54E-07
chr10_loss	105	11742	LumSec	REEP3	-1.022	5.88E-09	5.26E-07
chr10_loss	105	11742	LumSec	PTPN20	-0.764	6.22E-09	5.26E-07
chr10_loss	105	11742	LumSec	GLUD1P2	-0.765	6.22E-09	5.26E-07
chr10_loss	105	11742	LumSec	RBM20	-1.253	1.12E-07	8.45E-06
chr10_loss	105	11742	LumSec	RNLS	-1.05	1.52E-07	1.03E-05
chr10_loss	105	11742	LumSec	PCGF5	-1.502	1.91E-07	1.18E-05
chr10_loss	105	11742	LumSec	TACC2	-0.841	2.65E-07	1.50E-05
chr10_loss	105	11742	LumSec	RASSF4	-1.196	3.40E-07	1.77E-05
chr10_loss	105	11742	LumSec	PALD1	-1.231	9.09E-07	4.18E-05
chr10_loss	105	11742	LumSec	GRK5	-0.984	9.27E-07	4.18E-05
chr10_loss	105	11742	LumSec	MXI1	-0.897	1.15E-06	4.49E-05
chr10_loss	105	11742	LumSec	ANAPC16	-0.545	1.17E-06	4.49E-05
chr10_loss	105	11742	LumSec	VCL	-1.076	1.23E-06	4.49E-05
chr10_loss	105	11742	LumSec	UNC5B	-0.607	1.26E-06	4.49E-05
chr10_loss	105	11742	LumSec	LCOR	-1.515	1.35E-06	4.55E-05
chr10_loss	105	11742	LumSec	MIR4296	-1.102	1.57E-06	5.06E-05
chr10_loss	105	11742	LumSec	STN1	-0.547	2.32E-06	7.14E-05
chr10_loss	105	11742	LumSec	WBP1L	-1.177	2.55E-06	7.49E-05
chr10_loss	105	11742	LumSec	SH3PXD2A-AS1	-1.224	3.35E-06	9.36E-05
chr10_loss	105	11742	LumSec	LINC00856	-0.908	3.46E-06	9.36E-05

chr10_loss	105	11742	LumSec	VTI1A	-1.207	4.33E-06	1.13E-04
chr10_loss	105	11742	LumSec	INPP5F	-1.286	5.36E-06	1.34E-04
chr10_loss	105	11742	LumSec	SGMS1	-0.82	6.57E-06	1.59E-04
chr10_loss	105	11742	LumSec	DLG5	-0.877	6.96E-06	1.62E-04
chr10_loss	105	11742	LumSec	MIR4681	-1.378	9.18E-06	2.07E-04
chr10_loss	105	11742	LumSec	CCDC6	-1.132	9.69E-06	2.07E-04
chr10_loss	105	11742	LumSec	RASGEF1A	-0.874	9.98E-06	2.07E-04
chr10_loss	105	11742	LumSec	FAM53B	-0.897	1.01E-05	2.07E-04
chr10_loss	105	11742	LumSec	UBTD1	-0.881	1.05E-05	2.08E-04
chr10_loss	105	11742	LumSec	PWWP2B	-0.983	1.11E-05	2.13E-04
chr10_loss	105	11742	LumSec	ABLIM1	-0.806	1.13E-05	2.13E-04
chr10_loss	105	11742	LumSec	INPP5A	-0.733	1.48E-05	2.71E-04
chr10_loss	105	11742	LumSec	NFKB2	-1.027	1.81E-05	3.19E-04
chr10_loss	105	11742	LumSec	ZNF488	-2.158	1.84E-05	3.19E-04
chr10_loss	105	11742	LumSec	GLRX3	-0.928	2.13E-05	3.60E-04
chr10_loss	105	11742	LumSec	AVPI1	-1.056	2.73E-05	4.51E-04
chr10_loss	105	11742	LumSec	KAT6B	-0.971	3.02E-05	4.88E-04
chr10_loss	105	11742	LumSec	CHST3	-0.763	3.32E-05	5.23E-04
chr10_loss	105	11742	LumSec	MARVELD1	-0.988	3.80E-05	5.85E-04
chr10_loss	105	11742	LumSec	FXYP4	-1.322	4.13E-05	6.21E-04
chr10_loss	105	11742	LumSec	NANOS1	-0.854	4.36E-05	6.42E-04
chr10_loss	105	11742	LumSec	SIRT1	-1.438	4.50E-05	6.48E-04
chr10_loss	105	11742	LumSec	SLC25A28	-0.885	4.79E-05	6.66E-04
chr10_loss	105	11742	LumSec	TCERG1L	-1.271	4.86E-05	6.66E-04
chr10_loss	105	11742	LumSec	SGPL1	-1.455	4.92E-05	6.66E-04
chr10_loss	105	11742	LumSec	LZTS2	-1.14	5.29E-05	6.85E-04
chr10_loss	105	11742	LumSec	EXOC6	-0.967	5.33E-05	6.85E-04
chr10_loss	105	11742	LumSec	NRG3	-0.934	5.37E-05	6.85E-04
chr10_loss	105	11742	LumSec	USP54	-1.106	5.58E-05	6.94E-04
chr10_loss	105	11742	LumSec	OAT	-1.027	5.64E-05	6.94E-04
chr10_loss	105	11742	LumSec	CFAP70	-2.109	6.85E-05	8.27E-04
chr10_loss	105	11742	LumSec	PRKG1	-1.082	7.06E-05	8.27E-04
chr10_loss	105	11742	LumSec	CRTAC1	-0.696	7.08E-05	8.27E-04
chr10_loss	105	11742	LumSec	STK32C	-0.856	7.31E-05	8.39E-04
chr10_loss	105	11742	LumSec	DNAJC12	-1.188	7.63E-05	8.61E-04
chr10_loss	105	11742	LumSec	PAX2	-1.736	7.99E-05	8.86E-04
chr10_loss	105	11742	LumSec	MGMT	-0.776	8.41E-05	9.00E-04
chr10_loss	105	11742	LumSec	FRAT2	-1.416	8.56E-05	9.00E-04
chr10_loss	105	11742	LumSec	FLJ37201	-0.772	8.64E-05	9.00E-04
chr10_loss	105	11742	LumSec	PARG	-1.047	8.74E-05	9.00E-04
chr10_loss	105	11742	LumSec	DNAJC9-AS1	-1.547	8.77E-05	9.00E-04
chr10_loss	105	11742	LumSec	LINC00595	-1.021	8.97E-05	9.06E-04
chr10_loss	105	11742	LumSec	SORBS1	-0.805	9.55E-05	9.51E-04
chr10_loss	105	11742	LumSec	RGS10	-0.78	9.89E-05	9.71E-04
chr10_loss	105	11742	LumSec	CCDC186	-1.119	1.02E-04	9.86E-04
chr10_loss	105	11742	LumSec	DOCK1	-0.538	1.04E-04	9.87E-04
chr10_loss	105	11742	LumSec	TMEM72-AS1	-0.663	1.10E-04	1.04E-03
chr10_loss	105	11742	LumSec	PPIF	-1.359	1.13E-04	1.05E-03
chr10_loss	105	11742	LumSec	MRPS16	-1.543	1.15E-04	1.05E-03
chr10_loss	105	11742	LumSec	BAG3	-0.802	1.18E-04	1.07E-03
chr10_loss	105	11742	LumSec	CNNM2	-0.817	1.21E-04	1.08E-03
chr10_loss	105	11742	LumSec	SHOC2	-0.939	1.26E-04	1.11E-03
chr10_loss	105	11742	LumSec	DLG5-AS1	-1.027	1.32E-04	1.14E-03
chr10_loss	105	11742	LumSec	ZMIZ1-AS1	-0.5	1.33E-04	1.14E-03
chr10_loss	105	11742	LumSec	ABRAXAS2	-0.903	1.47E-04	1.24E-03
chr10_loss	105	11742	LumSec	TRIM8	-0.849	1.49E-04	1.24E-03
chr10_loss	105	11742	LumSec	HABP2	-1.021	1.60E-04	1.32E-03
chr10_loss	105	11742	LumSec	PRDX3	-1.319	1.65E-04	1.34E-03
chr10_loss	105	11742	LumSec	CALHM2	-2.922	1.72E-04	1.39E-03

chr10_loss	105	11742	LumSec	LOXL4	-0.674	1.74E-04	1.39E-03
chr10_loss	105	11742	LumSec	POLR3A	-0.932	1.76E-04	1.39E-03
chr10_loss	105	11742	LumSec	ENTPD1	-2.247	1.81E-04	1.41E-03
chr10_loss	105	11742	LumSec	MIR107	-2.307	1.90E-04	1.46E-03
chr10_loss	105	11742	LumSec	ECHS1	-1.041	1.93E-04	1.46E-03
chr10_loss	105	11742	LumSec	BBIP1	-0.977	2.00E-04	1.46E-03
chr10_loss	105	11742	LumSec	CHST15	-0.98	2.01E-04	1.46E-03
chr10_loss	105	11742	LumSec	DNAJC9	-1.47	2.01E-04	1.46E-03
chr10_loss	105	11742	LumSec	JAKMIP3	-1.248	2.01E-04	1.46E-03
chr10_loss	105	11742	LumSec	CUTC	-1.503	2.04E-04	1.46E-03
chr10_loss	105	11742	LumSec	LIPA	-0.952	2.05E-04	1.46E-03
chr10_loss	105	11742	LumSec	OLMALINC	-1.086	2.10E-04	1.48E-03
chr10_loss	105	11742	LumSec	MYPN	-1.322	2.24E-04	1.57E-03
chr10_loss	105	11742	LumSec	WAPL	-0.852	2.29E-04	1.58E-03
chr10_loss	105	11742	LumSec	JMJD1C	-0.74	2.54E-04	1.74E-03
chr10_loss	105	11742	LumSec	C10orf55	-1.429	2.73E-04	1.85E-03
chr10_loss	105	11742	LumSec	ANK3	-0.814	2.77E-04	1.85E-03
chr10_loss	105	11742	LumSec	HK1	-0.599	2.84E-04	1.89E-03
chr10_loss	105	11742	LumSec	GRID1	-0.755	3.12E-04	2.03E-03
chr10_loss	105	11742	LumSec	ADRB1	-1.09	3.12E-04	2.03E-03
chr10_loss	105	11742	LumSec	CCSER2	-0.747	3.80E-04	2.45E-03
chr10_loss	105	11742	LumSec	R3HCC1L	-1.326	3.87E-04	2.47E-03
chr10_loss	105	11742	LumSec	TBC1D12	-0.471	3.96E-04	2.50E-03
chr10_loss	105	11742	LumSec	FRAT1	-1.75	4.01E-04	2.50E-03
chr10_loss	105	11742	LumSec	UNC5B-AS1	-0.645	4.02E-04	2.50E-03
chr10_loss	105	11742	LumSec	WNT8B	-2.73	4.29E-04	2.64E-03
chr10_loss	105	11742	LumSec	CDH23	-0.485	4.55E-04	2.78E-03
chr10_loss	105	11742	LumSec	PI4K2A	-0.91	4.65E-04	2.81E-03
chr10_loss	105	11742	LumSec	NODAL	-1.003	4.88E-04	2.91E-03
chr10_loss	105	11742	LumSec	ATAD1	-1.459	4.90E-04	2.91E-03
chr10_loss	105	11742	LumSec	C10orf91	-0.615	5.01E-04	2.95E-03
chr10_loss	105	11742	LumSec	ADK	-0.498	5.05E-04	2.95E-03
chr10_loss	105	11742	LumSec	GBF1	-0.578	5.17E-04	2.99E-03
chr10_loss	105	11742	LumSec	BMS1	-1.152	5.28E-04	3.03E-03
chr10_loss	105	11742	LumSec	PBLD	-0.847	5.63E-04	3.20E-03
chr10_loss	105	11742	LumSec	MYOZ1	-0.821	5.93E-04	3.33E-03
chr10_loss	105	11742	LumSec	TLX1	-0.89	5.96E-04	3.33E-03
chr10_loss	105	11742	LumSec	PANK1	-2.435	6.09E-04	3.38E-03
chr10_loss	105	11742	LumSec	COX15	-1.383	6.51E-04	3.56E-03
chr10_loss	105	11742	LumSec	PPA1	-1.027	6.54E-04	3.56E-03
chr10_loss	105	11742	LumSec	PDZD8	-1.218	6.58E-04	3.56E-03
chr10_loss	105	11742	LumSec	SORCS3	-1.221	6.81E-04	3.66E-03
chr10_loss	105	11742	LumSec	HPSE2	-0.988	6.92E-04	3.68E-03
chr10_loss	105	11742	LumSec	CTNNA3	-1.161	6.95E-04	3.68E-03
chr10_loss	105	11742	LumSec	DEPP1	-1.213	7.46E-04	3.92E-03
chr10_loss	105	11742	LumSec	CXCL12	-0.999	7.70E-04	4.01E-03
chr10_loss	105	11742	LumSec	PITX3	-0.784	7.85E-04	4.06E-03
chr10_loss	105	11742	LumSec	MICU1	-0.445	8.00E-04	4.11E-03
chr10_loss	105	11742	LumSec	ADD3	-0.82	8.34E-04	4.24E-03
chr10_loss	105	11742	LumSec	VDAC2	-0.887	8.39E-04	4.24E-03
chr10_loss	105	11742	LumSec	SORCS1	-1.173	8.52E-04	4.27E-03
chr10_loss	105	11742	LumSec	CPEB3	-0.524	8.72E-04	4.31E-03
chr10_loss	105	11742	LumSec	ASCC1	-0.343	8.73E-04	4.31E-03
chr10_loss	105	11742	LumSec	SFXN3	-0.599	9.24E-04	4.53E-03
chr10_loss	105	11742	LumSec	PPP3CB	-1.575	9.52E-04	4.58E-03
chr10_loss	105	11742	LumSec	ZDHHC16	-1.816	9.59E-04	4.58E-03
chr10_loss	105	11742	LumSec	OPN4	-1.703	9.61E-04	4.58E-03
chr10_loss	105	11742	LumSec	SUFU	-0.581	9.66E-04	4.58E-03
chr10_loss	105	11742	LumSec	MIR2110	-1.095	9.67E-04	4.58E-03

chr10_loss	105	11742	LumSec	HPS6	-0.975	9.77E-04	4.59E-03
chr10_loss	105	11742	LumSec	TNKS2	-1.108	9.95E-04	4.65E-03
chr10_loss	105	11742	LumSec	RPARP-AS1	-1.468	1.06E-03	4.91E-03
chr10_loss	105	11742	LumSec	PCBD1	-0.451	1.10E-03	5.05E-03
chr10_loss	105	11742	LumSec	ITPRIP	-0.772	1.12E-03	5.09E-03
chr10_loss	105	11742	LumSec	MMS19	-0.757	1.12E-03	5.09E-03
chr10_loss	105	11742	LumSec	PRLHR	-0.441	1.14E-03	5.15E-03
chr10_loss	105	11742	LumSec	AGAP11	-0.719	1.18E-03	5.27E-03
chr10_loss	105	11742	LumSec	ADAM12	-0.541	1.18E-03	5.27E-03
chr10_loss	105	11742	LumSec	ZCCHC24	-0.939	1.25E-03	5.53E-03
chr10_loss	105	11742	LumSec	PAOX	-0.679	1.27E-03	5.55E-03
chr10_loss	105	11742	LumSec	ZFYVE27	-0.963	1.28E-03	5.55E-03
chr10_loss	105	11742	LumSec	ZWINT	-1.374	1.29E-03	5.55E-03
chr10_loss	105	11742	LumSec	HECTD2-AS1	-0.596	1.29E-03	5.55E-03
chr10_loss	105	11742	LumSec	FBXW4	-1.082	1.30E-03	5.55E-03
chr10_loss	105	11742	LumSec	PCDH15	-0.55	1.30E-03	5.55E-03
chr10_loss	105	11742	LumSec	CFAP43	-1.409	1.33E-03	5.64E-03
chr10_loss	105	11742	LumSec	LRRC27	-1.003	1.36E-03	5.73E-03
chr10_loss	105	11742	LumSec	SLC29A3	-0.518	1.39E-03	5.81E-03
chr10_loss	105	11742	LumSec	ZFAND4	-1.125	1.41E-03	5.83E-03
chr10_loss	105	11742	LumSec	CCAR1	-1.31	1.41E-03	5.83E-03
chr10_loss	105	11742	LumSec	BCCIP	-1.427	1.42E-03	5.83E-03
chr10_loss	105	11742	LumSec	SFXN4	-1.113	1.43E-03	5.83E-03
chr10_loss	105	11742	LumSec	NPFFR1	-0.853	1.45E-03	5.89E-03
chr10_loss	105	11742	LumSec	ZRANB1	-0.781	1.48E-03	5.98E-03
chr10_loss	105	11742	LumSec	TLX1NB	-0.892	1.56E-03	6.23E-03
chr10_loss	105	11742	LumSec	CEP55	-1.294	1.57E-03	6.24E-03
chr10_loss	105	11742	LumSec	MKI67	-1.066	1.58E-03	6.26E-03
chr10_loss	105	11742	LumSec	PIK3AP1	-1.129	1.59E-03	6.26E-03
chr10_loss	105	11742	LumSec	TDRD1	-1.068	1.61E-03	6.30E-03
chr10_loss	105	11742	LumSec	C10orf95	-1.418	1.65E-03	6.43E-03
chr10_loss	105	11742	LumSec	GLUD1	-0.74	1.68E-03	6.48E-03
chr10_loss	105	11742	LumSec	IPMK	-0.9	1.70E-03	6.55E-03
chr10_loss	105	11742	LumSec	CSGALNACT2	-1.45	1.71E-03	6.55E-03
chr10_loss	105	11742	LumSec	TAF5	-1.584	1.80E-03	6.80E-03
chr10_loss	105	11742	LumSec	ENTPD1-AS1	-0.727	1.80E-03	6.80E-03
chr10_loss	105	11742	LumSec	FGFR2	-0.768	1.81E-03	6.80E-03
chr10_loss	105	11742	LumSec	SMC3	-1.272	1.88E-03	7.02E-03
chr10_loss	105	11742	LumSec	KAZALD1	-0.649	1.91E-03	7.12E-03
chr10_loss	105	11742	LumSec	BNIP3	-0.69	1.93E-03	7.14E-03
chr10_loss	105	11742	LumSec	NCOA4	-1.154	1.97E-03	7.24E-03
chr10_loss	105	11742	LumSec	CFL1P1	-1.146	1.98E-03	7.24E-03
chr10_loss	105	11742	LumSec	PDZD7	-0.864	2.00E-03	7.24E-03
chr10_loss	105	11742	LumSec	CISD1	-0.863	2.02E-03	7.24E-03
chr10_loss	105	11742	LumSec	NOLC1	-0.39	2.02E-03	7.24E-03
chr10_loss	105	11742	LumSec	MIR4295	-1.623	2.02E-03	7.24E-03
chr10_loss	105	11742	LumSec	ATRNL1	-1.448	2.09E-03	7.46E-03
chr10_loss	105	11742	LumSec	KCNIP2	-0.857	2.29E-03	8.10E-03
chr10_loss	105	11742	LumSec	CHUK	-2.344	2.30E-03	8.10E-03
chr10_loss	105	11742	LumSec	UBE2D1	-2.211	2.33E-03	8.19E-03
chr10_loss	105	11742	LumSec	BICC1	-0.673	2.39E-03	8.33E-03
chr10_loss	105	11742	LumSec	GOT1	-0.948	2.43E-03	8.42E-03
chr10_loss	105	11742	LumSec	FANK1	-0.907	2.55E-03	8.81E-03
chr10_loss	105	11742	LumSec	HNRNPH3	-0.841	2.57E-03	8.84E-03
chr10_loss	105	11742	LumSec	TSPAN15	-0.65	2.74E-03	9.37E-03
chr10_loss	105	11742	LumSec	PTPRE	-0.664	2.76E-03	9.40E-03
chr10_loss	105	11742	LumSec	GHITM	-0.93	2.80E-03	9.47E-03
chr10_loss	105	11742	LumSec	NRBF2	-0.918	2.81E-03	9.47E-03
chr10_loss	105	11742	LumSec	GPAM	-0.866	2.94E-03	9.86E-03

chr10_loss	105	11742	LumSec	PDCD4	-0.582	3.18E-03	1.06E-02
chr10_loss	105	11742	LumSec	DUSP5	-0.751	3.22E-03	1.06E-02
chr10_loss	105	11742	LumSec	DNAJB12	-0.466	3.24E-03	1.06E-02
chr10_loss	105	11742	LumSec	RRP12	-0.942	3.25E-03	1.06E-02
chr10_loss	105	11742	LumSec	TECTB	-2.45	3.25E-03	1.06E-02
chr10_loss	105	11742	LumSec	MORN4	-0.706	3.29E-03	1.07E-02
chr10_loss	105	11742	LumSec	CFAP58	-0.738	3.34E-03	1.08E-02
chr10_loss	105	11742	LumSec	BLOC1S2	-0.493	3.38E-03	1.09E-02
chr10_loss	105	11742	LumSec	ADAMTS14	-0.84	3.50E-03	1.12E-02
chr10_loss	105	11742	LumSec	EXOSC1	-1.457	3.52E-03	1.12E-02
chr10_loss	105	11742	LumSec	PLEKHS1	-1.066	3.54E-03	1.12E-02
chr10_loss	105	11742	LumSec	LBX1-AS1	-0.152	3.55E-03	1.12E-02
chr10_loss	105	11742	LumSec	CPN1	-1.262	3.56E-03	1.12E-02
chr10_loss	105	11742	LumSec	ADIRF	-0.695	3.57E-03	1.12E-02
chr10_loss	105	11742	LumSec	SHTN1	-0.93	3.58E-03	1.12E-02
chr10_loss	105	11742	LumSec	C10orf90	-0.695	3.69E-03	1.14E-02
chr10_loss	105	11742	LumSec	ADD3-AS1	-1.119	3.80E-03	1.17E-02
chr10_loss	105	11742	LumSec	HERC4	-1.192	3.84E-03	1.18E-02
chr10_loss	105	11742	LumSec	ATE1	-0.793	3.86E-03	1.18E-02
chr10_loss	105	11742	LumSec	SHLD2	-0.541	3.89E-03	1.19E-02
chr10_loss	105	11742	LumSec	FGF8	-0.906	4.14E-03	1.26E-02
chr10_loss	105	11742	LumSec	EIF5AL1	-2.912	4.19E-03	1.27E-02
chr10_loss	105	11742	LumSec	NPY4R	-1.159	4.22E-03	1.27E-02
chr10_loss	105	11742	LumSec	PSAP	-0.815	4.31E-03	1.29E-02
chr10_loss	105	11742	LumSec	ZNF503-AS1	-1.132	4.45E-03	1.33E-02
chr10_loss	105	11742	LumSec	LDB3	-1.284	4.55E-03	1.35E-02
chr10_loss	105	11742	LumSec	PDLIM1	-0.863	4.55E-03	1.35E-02
chr10_loss	105	11742	LumSec	ELOVL3	-1.195	4.72E-03	1.39E-02
chr10_loss	105	11742	LumSec	ZDHHC6	-1.13	4.78E-03	1.40E-02
chr10_loss	105	11742	LumSec	OGA	-0.778	4.81E-03	1.40E-02
chr10_loss	105	11742	LumSec	TUBGCP2	-0.663	4.90E-03	1.42E-02
chr10_loss	105	11742	LumSec	DDIT4	-0.351	5.16E-03	1.49E-02
chr10_loss	105	11742	LumSec	MIR609	-1.279	5.23E-03	1.51E-02
chr10_loss	105	11742	LumSec	ANXA7	-0.614	5.30E-03	1.51E-02
chr10_loss	105	11742	LumSec	KIF11	-0.92	5.32E-03	1.51E-02
chr10_loss	105	11742	LumSec	RPP30	-3.691	5.34E-03	1.51E-02
chr10_loss	105	11742	LumSec	HSPA12A	-0.716	5.34E-03	1.51E-02
chr10_loss	105	11742	LumSec	KCNIP2-AS1	-0.64	5.45E-03	1.54E-02
chr10_loss	105	11742	LumSec	COL17A1	-1.761	5.58E-03	1.57E-02
chr10_loss	105	11742	LumSec	IFIT5	-2.055	5.61E-03	1.57E-02
chr10_loss	105	11742	LumSec	NKX1-2	-0.638	5.88E-03	1.64E-02
chr10_loss	105	11742	LumSec	A1CF	-3.408	5.97E-03	1.66E-02
chr10_loss	105	11742	LumSec	CSTF2T	-0.55	6.08E-03	1.68E-02
chr10_loss	105	11742	LumSec	MIR1307	-0.517	6.15E-03	1.69E-02
chr10_loss	105	11742	LumSec	TEX36	-1.723	6.22E-03	1.70E-02
chr10_loss	105	11742	LumSec	UROS	-1.472	6.27E-03	1.71E-02
chr10_loss	105	11742	LumSec	LRRC20	-0.408	6.41E-03	1.73E-02
chr10_loss	105	11742	LumSec	NT5C2	-0.445	6.47E-03	1.73E-02
chr10_loss	105	11742	LumSec	STOX1	-1.259	6.49E-03	1.73E-02
chr10_loss	105	11742	LumSec	TIAL1	-0.41	6.50E-03	1.73E-02
chr10_loss	105	11742	LumSec	BLNK	-0.937	6.53E-03	1.73E-02
chr10_loss	105	11742	LumSec	SCD	-0.201	6.55E-03	1.73E-02
chr10_loss	105	11742	LumSec	SFR1	-0.537	6.56E-03	1.73E-02
chr10_loss	105	11742	LumSec	HECTD2	-0.801	6.56E-03	1.73E-02
chr10_loss	105	11742	LumSec	PLPP4	-0.771	6.61E-03	1.74E-02
chr10_loss	105	11742	LumSec	PTEN	-0.581	7.04E-03	1.85E-02
chr10_loss	105	11742	LumSec	SHLD2P1	#NAME?	7.21E-03	1.88E-02
chr10_loss	105	11742	LumSec	EBF3	-0.49	7.31E-03	1.90E-02
chr10_loss	105	11742	LumSec	C10orf25	-0.971	7.46E-03	1.93E-02

chr10_loss	105	11742	LumSec	KLLN	-0.726	7.72E-03	1.99E-02
chr10_loss	105	11742	LumSec	SNORA19	-0.918	7.72E-03	1.99E-02
chr10_loss	105	11742	LumSec	KCNMA1	-0.37	7.79E-03	2.00E-02
chr10_loss	105	11742	LumSec	ERLIN1	-1.059	7.95E-03	2.03E-02
chr10_loss	105	11742	LumSec	HHEX	-1.107	7.98E-03	2.03E-02
chr10_loss	105	11742	LumSec	LOC399815	-1.853	8.02E-03	2.03E-02
chr10_loss	105	11742	LumSec	FAM24B	-1.807	8.12E-03	2.05E-02
chr10_loss	105	11742	LumSec	RPS24	-0.914	8.14E-03	2.05E-02
chr10_loss	105	11742	LumSec	SMNDC1	-0.768	8.46E-03	2.11E-02
chr10_loss	105	11742	LumSec	RSU1P2	-3.073	8.49E-03	2.11E-02
chr10_loss	105	11742	LumSec	PSD	-0.74	8.50E-03	2.11E-02
chr10_loss	105	11742	LumSec	KNDC1	-1.134	8.53E-03	2.11E-02
chr10_loss	105	11742	LumSec	ANXA2P3	-3.066	8.60E-03	2.13E-02
chr10_loss	105	11742	LumSec	MMRN2	-1.027	8.77E-03	2.16E-02
chr10_loss	105	11742	LumSec	COMTD1	-0.61	8.87E-03	2.17E-02
chr10_loss	105	11742	LumSec	EDRF1	-0.753	8.88E-03	2.17E-02
chr10_loss	105	11742	LumSec	MIR3924	-2.747	9.19E-03	2.24E-02
chr10_loss	105	11742	LumSec	PDCD11	-0.636	9.49E-03	2.30E-02
chr10_loss	105	11742	LumSec	C10orf142	-0.484	9.51E-03	2.30E-02
chr10_loss	105	11742	LumSec	VWA2	-0.799	9.62E-03	2.31E-02
chr10_loss	105	11742	LumSec	STAMBPL1	-0.699	9.63E-03	2.31E-02
chr10_loss	105	11742	LumSec	DHX32	-0.815	9.68E-03	2.32E-02
chr10_loss	105	11742	LumSec	LHPP	-0.725	9.75E-03	2.32E-02
chr10_loss	105	11742	LumSec	HKDC1	-1.395	9.75E-03	2.32E-02
chr10_loss	105	11742	LumSec	MIR3944	-0.659	1.00E-02	2.37E-02
chr10_loss	105	11742	LumSec	HTRA1	-0.998	1.01E-02	2.37E-02
chr10_loss	105	11742	LumSec	HPS1	-1.376	1.02E-02	2.40E-02
chr10_loss	105	11742	LumSec	MCU	-0.418	1.03E-02	2.40E-02
chr10_loss	105	11742	LumSec	HTR7	-1.154	1.03E-02	2.41E-02
chr10_loss	105	11742	LumSec	LRMDA	-0.752	1.04E-02	2.42E-02
chr10_loss	105	11742	LumSec	MIR1287	-0.434	1.04E-02	2.42E-02
chr10_loss	105	11742	LumSec	CASC2	-0.897	1.09E-02	2.52E-02
chr10_loss	105	11742	LumSec	CYP2C19	-2.707	1.10E-02	2.52E-02
chr10_loss	105	11742	LumSec	ERCC6	-0.523	1.10E-02	2.52E-02
chr10_loss	105	11742	LumSec	ACSM6	-0.876	1.10E-02	2.52E-02
chr10_loss	105	11742	LumSec	JMJD1C-AS1	-0.752	1.11E-02	2.53E-02
chr10_loss	105	11742	LumSec	ANXA11	-0.311	1.12E-02	2.55E-02
chr10_loss	105	11742	LumSec	MIR1256	-0.138	1.14E-02	2.57E-02
chr10_loss	105	11742	LumSec	PYROXD2	-0.543	1.14E-02	2.58E-02
chr10_loss	105	11742	LumSec	EIF4EBP2	-0.89	1.15E-02	2.60E-02
chr10_loss	105	11742	LumSec	TMEM254-AS1	-0.565	1.16E-02	2.60E-02
chr10_loss	105	11742	LumSec	ZNF487	-0.704	1.17E-02	2.62E-02
chr10_loss	105	11742	LumSec	DNMBP	-0.507	1.21E-02	2.67E-02
chr10_loss	105	11742	LumSec	DNMBP-AS1	-0.471	1.21E-02	2.67E-02
chr10_loss	105	11742	LumSec	NKX2-3	-1.203	1.21E-02	2.67E-02
chr10_loss	105	11742	LumSec	MIR4483	-0.789	1.23E-02	2.71E-02
chr10_loss	105	11742	LumSec	VPS26A	-0.721	1.24E-02	2.73E-02
chr10_loss	105	11742	LumSec	FAM241B	-0.923	1.26E-02	2.75E-02
chr10_loss	105	11742	LumSec	GPRIN2	-0.67	1.26E-02	2.76E-02
chr10_loss	105	11742	LumSec	SAR1A	-0.917	1.27E-02	2.77E-02
chr10_loss	105	11742	LumSec	CYP2C9	-3.255	1.27E-02	2.77E-02
chr10_loss	105	11742	LumSec	ACTR1A	-0.654	1.29E-02	2.78E-02
chr10_loss	105	11742	LumSec	HOGA1	-1.507	1.29E-02	2.78E-02
chr10_loss	105	11742	LumSec	CAMK2G	-0.495	1.30E-02	2.78E-02
chr10_loss	105	11742	LumSec	VENTX	-3.893	1.30E-02	2.78E-02
chr10_loss	105	11742	LumSec	CPXM2	-0.495	1.30E-02	2.78E-02
chr10_loss	105	11742	LumSec	MIR3663	-1.278	1.31E-02	2.80E-02
chr10_loss	105	11742	LumSec	TWNK	-1.108	1.34E-02	2.84E-02
chr10_loss	105	11742	LumSec	CLRN3	-1.02	1.39E-02	2.94E-02

chr10_loss	105	11742	LumSec	MIR4679-1	-1.538	1.42E-02	2.99E-02
chr10_loss	105	11742	LumSec	ANKRD1	-2.252	1.43E-02	2.99E-02
chr10_loss	105	11742	LumSec	VAX1	-0.383	1.43E-02	2.99E-02
chr10_loss	105	11742	LumSec	MFSD13A	-0.987	1.43E-02	2.99E-02
chr10_loss	105	11742	LumSec	MCMBP	-0.697	1.43E-02	2.99E-02
chr10_loss	105	11742	LumSec	CFAP46	-1.513	1.45E-02	3.00E-02
chr10_loss	105	11742	LumSec	ARHGAP19-SLIT1	-0.709	1.46E-02	3.01E-02
chr10_loss	105	11742	LumSec	EGR2	-0.424	1.46E-02	3.01E-02
chr10_loss	105	11742	LumSec	SFTPD	-1.003	1.50E-02	3.09E-02
chr10_loss	105	11742	LumSec	C10orf71	-2.906	1.52E-02	3.11E-02
chr10_loss	105	11742	LumSec	C10orf143	-0.566	1.53E-02	3.12E-02
chr10_loss	105	11742	LumSec	CHAT	-2.241	1.53E-02	3.12E-02
chr10_loss	105	11742	LumSec	ZNF239	-2.022	1.55E-02	3.15E-02
chr10_loss	105	11742	LumSec	NSMCE4A	-1.096	1.58E-02	3.21E-02
chr10_loss	105	11742	LumSec	ADAM8	-0.661	1.60E-02	3.22E-02
chr10_loss	105	11742	LumSec	MIR378C	-0.561	1.60E-02	3.22E-02
chr10_loss	105	11742	LumSec	OIT3	-0.734	1.61E-02	3.24E-02
chr10_loss	105	11742	LumSec	LINC00857	-0.802	1.62E-02	3.24E-02
chr10_loss	105	11742	LumSec	FBXL15	-0.712	1.62E-02	3.24E-02
chr10_loss	105	11742	LumSec	RUFY2	-0.802	1.66E-02	3.31E-02
chr10_loss	105	11742	LumSec	FAM24B-CUZD1	-1.358	1.68E-02	3.32E-02
chr10_loss	105	11742	LumSec	PRKG1-AS1	-2.786	1.68E-02	3.32E-02
chr10_loss	105	11742	LumSec	DCLRE1A	-0.874	1.68E-02	3.32E-02
chr10_loss	105	11742	LumSec	PPRC1	-0.717	1.74E-02	3.42E-02
chr10_loss	105	11742	LumSec	NEURL1	-0.904	1.76E-02	3.44E-02
chr10_loss	105	11742	LumSec	HNRNPF	-0.435	1.79E-02	3.50E-02
chr10_loss	105	11742	LumSec	IDE	-0.724	1.80E-02	3.51E-02
chr10_loss	105	11742	LumSec	CDHR1	-1.214	1.81E-02	3.51E-02
chr10_loss	105	11742	LumSec	VSIR	-0.547	1.83E-02	3.55E-02
chr10_loss	105	11742	LumSec	LINC00865	-2.451	1.87E-02	3.59E-02
chr10_loss	105	11742	LumSec	HELLS	-1.044	1.87E-02	3.59E-02
chr10_loss	105	11742	LumSec	ATOH7	-1.308	1.92E-02	3.67E-02
chr10_loss	105	11742	LumSec	GDF10	-1.12	1.93E-02	3.70E-02
chr10_loss	105	11742	LumSec	MSMB	-1.665	1.96E-02	3.74E-02
chr10_loss	105	11742	LumSec	BTRC	-0.256	1.97E-02	3.75E-02
chr10_loss	105	11742	LumSec	EIF3A	-0.842	2.01E-02	3.81E-02
chr10_loss	105	11742	LumSec	PLEKHA1	-0.543	2.04E-02	3.86E-02
chr10_loss	105	11742	LumSec	ALOX5	-0.576	2.05E-02	3.87E-02
chr10_loss	105	11742	LumSec	CTAGE7P	-0.634	2.11E-02	3.96E-02
chr10_loss	105	11742	LumSec	ZNF365	-0.62	2.17E-02	4.07E-02
chr10_loss	105	11742	LumSec	NHLRC2	-0.958	2.20E-02	4.12E-02
chr10_loss	105	11742	LumSec	BORCS7	-2.139	2.25E-02	4.18E-02
chr10_loss	105	11742	LumSec	SLC25A16	-0.147	2.25E-02	4.18E-02
chr10_loss	105	11742	LumSec	ECD	-0.602	2.26E-02	4.18E-02
chr10_loss	105	11742	LumSec	WASHC2C	-3.12	2.26E-02	4.18E-02
chr10_loss	105	11742	LumSec	TLL2	-0.593	2.28E-02	4.19E-02
chr10_loss	105	11742	LumSec	ARHGAP22	-0.457	2.30E-02	4.22E-02
chr10_loss	105	11742	LumSec	PKD2L1	-0.481	2.32E-02	4.22E-02
chr10_loss	105	11742	LumSec	HIF1AN	-1.078	2.32E-02	4.22E-02
chr10_loss	105	11742	LumSec	FAM133CP	-2.394	2.32E-02	4.22E-02
chr10_loss	105	11742	LumSec	TM9SF3	-0.726	2.37E-02	4.31E-02
chr10_loss	105	11742	LumSec	AFAP1L2	-0.678	2.43E-02	4.38E-02
chr10_loss	105	11742	LumSec	C10orf53	-1.999	2.43E-02	4.38E-02
chr10_loss	105	11742	LumSec	ADGRA1	-1.43	2.46E-02	4.42E-02
chr10_loss	105	11742	LumSec	LINC01553	-0.935	2.55E-02	4.57E-02
chr10_loss	105	11742	LumSec	CABCOCO1	-0.683	2.61E-02	4.67E-02
chr10_loss	105	11742	LumSec	POLL	-0.763	2.62E-02	4.68E-02
chr10_loss	105	11742	LumSec	RBP3	-1.602	2.63E-02	4.69E-02
chr10_loss	105	11742	LumSec	SEC24C	-0.666	2.68E-02	4.76E-02

chr10_loss	105	11742	LumSec	INA	-0.9	2.74E-02	4.86E-02
chr10_loss	105	11742	LumSec	WASHC2A	-3.314	2.76E-02	4.88E-02
chr10_loss	105	11742	LumSec	CALHM3	-3.13	2.82E-02	4.97E-02
chr10_loss	105	11742	LumSec	ZNF33B	-0.564	2.83E-02	4.97E-02
chr16_loss	104	6599	LumHR	CDH1	-1.254	4.57E-12	1.88E-09
chr16_loss	104	6599	LumHR	GSE1	-0.814	1.76E-09	3.63E-07
chr16_loss	104	6599	LumHR	VAC14	-0.653	7.58E-09	1.04E-06
chr16_loss	104	6599	LumHR	BCAR1	-1.352	5.96E-08	6.14E-06
chr16_loss	104	6599	LumHR	MIR5093	-0.977	3.72E-07	3.07E-05
chr16_loss	104	6599	LumHR	CDT1	-1.002	7.39E-07	4.62E-05
chr16_loss	104	6599	LumHR	BANP	-1.144	7.86E-07	4.62E-05
chr16_loss	104	6599	LumHR	PIEZO1	-1.008	9.43E-07	4.86E-05
chr16_loss	104	6599	LumHR	ANKRD11	-0.663	1.62E-06	7.04E-05
chr16_loss	104	6599	LumHR	ZNF469	-1.456	1.71E-06	7.04E-05
chr16_loss	104	6599	LumHR	ZCCHC14	-0.839	2.44E-06	9.15E-05
chr16_loss	104	6599	LumHR	MIR4722	-0.981	3.17E-06	9.42E-05
chr16_loss	104	6599	LumHR	CKLF	-2.977	3.26E-06	9.42E-05
chr16_loss	104	6599	LumHR	CTCF	-1.037	3.40E-06	9.42E-05
chr16_loss	104	6599	LumHR	ZFPM1	-0.941	3.43E-06	9.42E-05
chr16_loss	104	6599	LumHR	CKLF-CMTM1	-2.813	3.98E-06	1.02E-04
chr16_loss	104	6599	LumHR	TK2	-0.98	5.94E-06	1.44E-04
chr16_loss	104	6599	LumHR	ZFH3	-0.766	8.31E-06	1.90E-04
chr16_loss	104	6599	LumHR	KATNB1	-1.539	1.11E-05	2.40E-04
chr16_loss	104	6599	LumHR	PSMB10	-1.353	1.66E-05	3.41E-04
chr16_loss	104	6599	LumHR	IRX5	-0.866	1.76E-05	3.41E-04
chr16_loss	104	6599	LumHR	CRNDE	-0.9	1.82E-05	3.41E-04
chr16_loss	104	6599	LumHR	PLEKHG4	-1.84	1.92E-05	3.45E-04
chr16_loss	104	6599	LumHR	RSPRY1	-1.596	2.14E-05	3.65E-04
chr16_loss	104	6599	LumHR	CMIP	-0.399	2.22E-05	3.65E-04
chr16_loss	104	6599	LumHR	FA2H	-1.1	2.41E-05	3.82E-04
chr16_loss	104	6599	LumHR	FTO	-0.647	2.57E-05	3.91E-04
chr16_loss	104	6599	LumHR	GFOD2	-1.162	2.79E-05	3.91E-04
chr16_loss	104	6599	LumHR	CTRL	-1.334	2.87E-05	3.91E-04
chr16_loss	104	6599	LumHR	CDH3	-0.854	2.92E-05	3.91E-04
chr16_loss	104	6599	LumHR	ESRP2	-0.994	2.94E-05	3.91E-04
chr16_loss	104	6599	LumHR	SLC7A5	-0.999	3.04E-05	3.92E-04
chr16_loss	104	6599	LumHR	NFATC3	-1.163	3.36E-05	4.11E-04
chr16_loss	104	6599	LumHR	PRDM7	-1.587	3.39E-05	4.11E-04
chr16_loss	104	6599	LumHR	SPATA2L	-1.032	5.64E-05	6.64E-04
chr16_loss	104	6599	LumHR	ATP6V0D1	-0.945	6.48E-05	7.42E-04
chr16_loss	104	6599	LumHR	SMPD3	-0.999	7.12E-05	7.93E-04
chr16_loss	104	6599	LumHR	PDP2	-1.175	8.54E-05	8.69E-04
chr16_loss	104	6599	LumHR	TCF25	-1.475	8.55E-05	8.69E-04
chr16_loss	104	6599	LumHR	JPH3	-1.114	8.56E-05	8.69E-04
chr16_loss	104	6599	LumHR	FBXO31	-0.914	8.65E-05	8.69E-04
chr16_loss	104	6599	LumHR	APRT	-1.677	1.09E-04	1.07E-03
chr16_loss	104	6599	LumHR	AP1G1	-0.895	1.23E-04	1.15E-03
chr16_loss	104	6599	LumHR	KLHDC4	-0.788	1.23E-04	1.15E-03
chr16_loss	104	6599	LumHR	MT1A	-0.864	1.29E-04	1.18E-03
chr16_loss	104	6599	LumHR	CMTM4	-1.012	1.42E-04	1.27E-03
chr16_loss	104	6599	LumHR	CHD9	-0.66	1.45E-04	1.27E-03
chr16_loss	104	6599	LumHR	ZNF778	-0.999	1.63E-04	1.40E-03
chr16_loss	104	6599	LumHR	AMFR	-0.866	1.79E-04	1.50E-03
chr16_loss	104	6599	LumHR	ZFP90	-1.188	1.88E-04	1.55E-03
chr16_loss	104	6599	LumHR	WWOX	-0.523	2.04E-04	1.65E-03
chr16_loss	104	6599	LumHR	CX3CL1	-0.903	2.32E-04	1.84E-03
chr16_loss	104	6599	LumHR	CMC2	-0.951	2.55E-04	1.98E-03
chr16_loss	104	6599	LumHR	TAF1C	-2.288	2.63E-04	2.01E-03
chr16_loss	104	6599	LumHR	ZNRF1	-0.85	3.11E-04	2.33E-03

chr16_loss	104	6599	LumHR	ZDHHC1	-0.981	3.21E-04	2.35E-03
chr16_loss	104	6599	LumHR	FHOD1	-0.81	3.26E-04	2.35E-03
chr16_loss	104	6599	LumHR	PLLP	-0.677	3.37E-04	2.39E-03
chr16_loss	104	6599	LumHR	MT2A	-0.873	3.59E-04	2.51E-03
chr16_loss	104	6599	LumHR	DNAAF1	-1.613	3.78E-04	2.59E-03
chr16_loss	104	6599	LumHR	NFAT5	-0.695	4.29E-04	2.89E-03
chr16_loss	104	6599	LumHR	CENPN	-1.075	4.35E-04	2.89E-03
chr16_loss	104	6599	LumHR	NUTF2	-0.802	5.35E-04	3.42E-03
chr16_loss	104	6599	LumHR	MIR4720	-1.376	5.37E-04	3.42E-03
chr16_loss	104	6599	LumHR	ST3GAL2	-0.927	5.39E-04	3.42E-03
chr16_loss	104	6599	LumHR	USP10	-1.048	5.55E-04	3.46E-03
chr16_loss	104	6599	LumHR	GNAO1	-0.808	6.06E-04	3.71E-03
chr16_loss	104	6599	LumHR	MIR3935	-1.208	6.13E-04	3.71E-03
chr16_loss	104	6599	LumHR	MIR1538	-0.961	6.25E-04	3.73E-03
chr16_loss	104	6599	LumHR	ZDHHC7	-0.916	6.35E-04	3.74E-03
chr16_loss	104	6599	LumHR	MAP1LC3B	-1.008	7.16E-04	4.16E-03
chr16_loss	104	6599	LumHR	E2F4	-1.442	7.42E-04	4.25E-03
chr16_loss	104	6599	LumHR	PRMT7	-1.331	7.55E-04	4.26E-03
chr16_loss	104	6599	LumHR	SLC9A5	-0.869	8.19E-04	4.56E-03
chr16_loss	104	6599	LumHR	OSGIN1	-1.107	9.40E-04	5.16E-03
chr16_loss	104	6599	LumHR	ATP2C2	-0.87	9.97E-04	5.41E-03
chr16_loss	104	6599	LumHR	RRAD	-1.835	1.02E-03	5.48E-03
chr16_loss	104	6599	LumHR	UTP4	-1.256	1.22E-03	6.45E-03
chr16_loss	104	6599	LumHR	ZC3H18	-0.215	1.34E-03	6.92E-03
chr16_loss	104	6599	LumHR	MIR5189	-0.995	1.34E-03	6.92E-03
chr16_loss	104	6599	LumHR	CCDC102A	-1.082	1.39E-03	7.07E-03
chr16_loss	104	6599	LumHR	NOB1	-1.575	1.49E-03	7.48E-03
chr16_loss	104	6599	LumHR	LOC388282	-0.919	1.57E-03	7.77E-03
chr16_loss	104	6599	LumHR	CHTF8	-1.586	1.61E-03	7.89E-03
chr16_loss	104	6599	LumHR	SPIRE2	-0.911	1.64E-03	7.95E-03
chr16_loss	104	6599	LumHR	CCL22	-0.745	1.86E-03	8.89E-03
chr16_loss	104	6599	LumHR	RIPOR1	-0.663	1.91E-03	9.04E-03
chr16_loss	104	6599	LumHR	SPG7	-0.371	1.96E-03	9.18E-03
chr16_loss	104	6599	LumHR	KIFC3	-0.519	1.98E-03	9.18E-03
chr16_loss	104	6599	LumHR	AGRP	-0.887	2.13E-03	9.69E-03
chr16_loss	104	6599	LumHR	CBFB	-0.881	2.14E-03	9.69E-03
chr16_loss	104	6599	LumHR	VAC14-AS1	-1.355	2.41E-03	1.08E-02
chr16_loss	104	6599	LumHR	MEAK7	-0.948	2.44E-03	1.08E-02
chr16_loss	104	6599	LumHR	LINC02139	-0.72	2.58E-03	1.13E-02
chr16_loss	104	6599	LumHR	GALNS	-1.081	2.61E-03	1.13E-02
chr16_loss	104	6599	LumHR	ADGRG1	-0.424	2.70E-03	1.16E-02
chr16_loss	104	6599	LumHR	COG8	-0.872	2.77E-03	1.17E-02
chr16_loss	104	6599	LumHR	CBLN1	-0.98	2.77E-03	1.17E-02
chr16_loss	104	6599	LumHR	NQO1	-0.823	2.91E-03	1.21E-02
chr16_loss	104	6599	LumHR	COQ9	-0.632	2.95E-03	1.22E-02
chr16_loss	104	6599	LumHR	MARVELD3	-0.19	3.47E-03	1.41E-02
chr16_loss	104	6599	LumHR	SNORD68	-0.903	3.64E-03	1.47E-02
chr16_loss	104	6599	LumHR	KCTD19	-2.039	3.85E-03	1.53E-02
chr16_loss	104	6599	LumHR	RANBP10	-0.913	3.86E-03	1.53E-02
chr16_loss	104	6599	LumHR	CDYL2	-0.686	4.23E-03	1.66E-02
chr16_loss	104	6599	LumHR	CES2	-1.391	4.36E-03	1.69E-02
chr16_loss	104	6599	LumHR	ACSF3	-0.427	4.46E-03	1.72E-02
chr16_loss	104	6599	LumHR	VPS35	-1.01	4.56E-03	1.74E-02
chr16_loss	104	6599	LumHR	SNORD71	-0.787	4.64E-03	1.74E-02
chr16_loss	104	6599	LumHR	C16orf46	-1.207	4.65E-03	1.74E-02
chr16_loss	104	6599	LumHR	RPL13	-0.936	4.77E-03	1.75E-02
chr16_loss	104	6599	LumHR	MMP2	-0.392	4.78E-03	1.75E-02
chr16_loss	104	6599	LumHR	C16orf74	-0.642	4.79E-03	1.75E-02
chr16_loss	104	6599	LumHR	MBTPS1	-0.636	4.94E-03	1.79E-02

chr16_loss	104	6599	LumHR	C16orf95	-0.668	5.00E-03	1.79E-02
chr16_loss	104	6599	LumHR	LOC283922	-1.815	5.25E-03	1.86E-02
chr16_loss	104	6599	LumHR	C16orf86	-0.847	5.28E-03	1.86E-02
chr16_loss	104	6599	LumHR	B3GNT9	-1.678	5.68E-03	1.98E-02
chr16_loss	104	6599	LumHR	IST1	-1.068	5.93E-03	2.05E-02
chr16_loss	104	6599	LumHR	TERF2	-0.618	6.24E-03	2.14E-02
chr16_loss	104	6599	LumHR	AKTIP	-0.724	6.29E-03	2.14E-02
chr16_loss	104	6599	LumHR	SNAI3-AS1	-0.745	6.34E-03	2.14E-02
chr16_loss	104	6599	LumHR	MPHOSPH6	-0.606	6.40E-03	2.15E-02
chr16_loss	104	6599	LumHR	MLYCD	-0.728	6.49E-03	2.16E-02
chr16_loss	104	6599	LumHR	C16orf87	-0.872	6.61E-03	2.18E-02
chr16_loss	104	6599	LumHR	TRADD	-0.89	6.82E-03	2.23E-02
chr16_loss	104	6599	LumHR	SLC12A4	-0.846	6.90E-03	2.24E-02
chr16_loss	104	6599	LumHR	LOC100287036	-0.719	6.98E-03	2.25E-02
chr16_loss	104	6599	LumHR	FBXL8	-0.891	7.07E-03	2.26E-02
chr16_loss	104	6599	LumHR	CES4A	-0.714	7.40E-03	2.35E-02
chr16_loss	104	6599	LumHR	CMTM3	-0.625	7.59E-03	2.35E-02
chr16_loss	104	6599	LumHR	LOC643802	-0.487	7.60E-03	2.35E-02
chr16_loss	104	6599	LumHR	HERPUD1	-0.681	7.68E-03	2.35E-02
chr16_loss	104	6599	LumHR	WDR59	-0.776	7.70E-03	2.35E-02
chr16_loss	104	6599	LumHR	PSKH1	-0.75	7.71E-03	2.35E-02
chr16_loss	104	6599	LumHR	ORC6	-0.992	7.79E-03	2.36E-02
chr16_loss	104	6599	LumHR	OGFOD1	-0.709	8.03E-03	2.41E-02
chr16_loss	104	6599	LumHR	EDC4	-0.543	8.07E-03	2.41E-02
chr16_loss	104	6599	LumHR	KIAA0513	-0.768	8.23E-03	2.44E-02
chr16_loss	104	6599	LumHR	TUBB3	-1.038	8.40E-03	2.47E-02
chr16_loss	104	6599	LumHR	MT1M	-0.937	8.67E-03	2.53E-02
chr16_loss	104	6599	LumHR	LPCAT2	-2.066	8.89E-03	2.58E-02
chr16_loss	104	6599	LumHR	DDX19B	-0.484	8.94E-03	2.58E-02
chr16_loss	104	6599	LumHR	IL34	-0.715	9.07E-03	2.58E-02
chr16_loss	104	6599	LumHR	TERF2IP	-0.755	9.08E-03	2.58E-02
chr16_loss	104	6599	LumHR	EXOC3L1	-0.577	9.24E-03	2.58E-02
chr16_loss	104	6599	LumHR	CA5A	-1.011	9.31E-03	2.58E-02
chr16_loss	104	6599	LumHR	THAP11	-0.706	9.36E-03	2.58E-02
chr16_loss	104	6599	LumHR	BBS2	-1.052	9.45E-03	2.58E-02
chr16_loss	104	6599	LumHR	ABCC12	-0.737	9.46E-03	2.58E-02
chr16_loss	104	6599	LumHR	CFAP20	-0.864	9.47E-03	2.58E-02
chr16_loss	104	6599	LumHR	CRISPLD2	-0.51	1.02E-02	2.78E-02
chr16_loss	104	6599	LumHR	HEATR3	-0.909	1.04E-02	2.79E-02
chr16_loss	104	6599	LumHR	GAN	-1.018	1.07E-02	2.85E-02
chr16_loss	104	6599	LumHR	PKD1L2	-0.77	1.13E-02	3.01E-02
chr16_loss	104	6599	LumHR	PKD1L3	-1.352	1.17E-02	3.09E-02
chr16_loss	104	6599	LumHR	LINC00920	-2.043	1.18E-02	3.09E-02
chr16_loss	104	6599	LumHR	GPT2	-0.806	1.21E-02	3.16E-02
chr16_loss	104	6599	LumHR	VPS4A	-0.805	1.23E-02	3.18E-02
chr16_loss	104	6599	LumHR	ENKD1	-0.937	1.32E-02	3.40E-02
chr16_loss	104	6599	LumHR	CLEC18C	-0.854	1.36E-02	3.48E-02
chr16_loss	104	6599	LumHR	PLA2G15	-0.973	1.37E-02	3.48E-02
chr16_loss	104	6599	LumHR	CENPT	-0.593	1.46E-02	3.66E-02
chr16_loss	104	6599	LumHR	FANCA	-1.26	1.46E-02	3.66E-02
chr16_loss	104	6599	LumHR	ZNF821	-1.014	1.47E-02	3.66E-02
chr16_loss	104	6599	LumHR	NUDT21	-0.689	1.49E-02	3.70E-02
chr16_loss	104	6599	LumHR	CHST6	-0.357	1.50E-02	3.71E-02
chr16_loss	104	6599	LumHR	CASC16	-0.786	1.58E-02	3.89E-02
chr16_loss	104	6599	LumHR	TMEM170A	-0.912	1.60E-02	3.91E-02
chr16_loss	104	6599	LumHR	CYBA	-2.489	1.67E-02	4.05E-02
chr16_loss	104	6599	LumHR	SNTB2	-0.252	1.71E-02	4.11E-02
chr16_loss	104	6599	LumHR	NUDT7	-1.254	1.78E-02	4.25E-02
chr16_loss	104	6599	LumHR	CCDC113	-0.83	1.79E-02	4.25E-02

chr16_loss	104	6599	LumHR	ARL2BP	-0.827	1.80E-02	4.25E-02
chr16_loss	104	6599	LumHR	CHST5	-0.576	1.83E-02	4.32E-02
chr16_loss	104	6599	LumHR	SNORA50A	-0.591	1.85E-02	4.33E-02
chr16_loss	104	6599	LumHR	PHLPP2	-0.845	1.91E-02	4.44E-02
chr16_loss	104	6599	LumHR	CDK10	-0.824	1.93E-02	4.47E-02
chr16_loss	104	6599	LumHR	PDPR	-1.069	2.07E-02	4.78E-02
chr16_loss	104	6599	LumHR	CIAO2B	-1.019	2.09E-02	4.78E-02
chr16_loss	104	6599	LumHR	KIAA0895L	-0.563	2.12E-02	4.82E-02
chr16_loss	104	6599	LumHR	SNORA70D	-1.015	2.13E-02	4.82E-02
chr16_loss	104	6599	LumHR	USB1	-0.964	2.17E-02	4.89E-02
chr16_loss	104	6599	LumHR	SNAI3	-1.057	2.19E-02	4.89E-02
chr16_loss	104	6599	LumHR	DYNC1LI2	-0.519	2.20E-02	4.89E-02
chr16_loss	104	6599	LumHR	NRN1L	-1.256	2.22E-02	4.93E-02
chr16_loss	104	6599	LumHR	TSNAXIP1	-0.63	2.26E-02	4.97E-02
chr16_loss	104	6599	LumHR	LOC100506083	-1.13	2.28E-02	4.97E-02
chr16_loss	104	6599	LumHR	CCL17	-0.914	2.28E-02	4.97E-02

Supplementary Table 5 – Comparison of ATAC signals in the genomic regions with CNA event between aneuploid cells and diploid cells

This table list the results from the Wilcoxon rank sum tests performed on breast cancer gene scores inferred from ATAC signals, showing differential gene scores in aneuploid cells with specific events versus diploid cells within a specific cell type. The columns list from left to right the CNA event tested (CNA event), the number of aneuploid cells with the event in the test (Cell with Event), the number of diploid cells in the test (Diploid cell), the cell type in which the test was perform (Cell Type), the log2 fold change (Log2FC), the gene tested with breast cancer genes highlighted in red (Gene), p value (P value) and adjusted p value through Benjamini-Hochberg Procedure (FDR).

Patient ID	Tissue ID	Spots under Tissue	Read Counts	Median UMI per Spot	Median Genes per Spot	Total Genes Detected	Reads Mapped to Exons	Reads Mapped to Intergenic Regions	Reads Mapped to Intronic Regions	Reads Mapped to Transcriptome
P03	P03L	3449	362,966,308	1108	797	22121	83.70%	2.70%	6%	81.70%
P14	P14L	3480	516,149,497	294	233	20289	76.60%	2.70%	2.50%	75.10%
P16	P16R	4113	318,856,655	1186	589	22490	87.80%	1.90%	2.70%	86.10%
P20	P20L	4350	548,695,268	2224	1108	24298	86.90%	1.60%	2.20%	84.90%
P32	P32R	3669	404,861,379	3570	1545	24788	84.50%	2.70%	3.80%	82.60%
P40	P40L	4326	392,617,133	1000	586	22979	75.30%	2.50%	4.80%	73.80%

Supplementary Table 6 – Spatial Transcriptomics Data Quality Control Metrics

This table lists the quality control metrics of spatial transcriptomic data using Visium (10X Genomics). The columns list from left to right the patient identifier (Patient ID), tissue ID, the number of spots under tissue (Spots under tissue), the number of reads sequenced (Read Counts), median UMI count per spot (Median UMI per Spot), median number of genes per spot (Median Genes per Spot), total genes detected per sample (Total Genes Detected), the proportion of reads mapped to exons, intergenic, intronic and transcriptome regions.