Supplementary Table 1: Top 100 hits from Genome-wide CRISPR Screen

gene	rank	effect_size	#_active_guide-RNA
ZNF638	1	2.63205	4
FAM208A	2	2.24327	4
PPHLN1	3	2.13391	4
MPHOSPH8	4	2.08711	4
GGT1	5	1.10441	4
SETDB1	6	2.21309	3
CISD2	7	1.72321	3
ZNT1	8	0.959286	4
DUOXA2	9	1.23413	3
TESC	10	1.2392	3
KLHDC3	11	1.36548	3
MEGF6	12	0.967221	4
PDS5A	13	1.32098	3
NTN1	14	0.98269	4
RMDN1	15	0.977388	4
GP5	16	1.15447	3
OR6B3	17	1.15165	3
TP53TG3	18	0.911801	4
PHF8	19	1.23008	3
NARS	20	1.16104	3
TRIM64	21	1.12279	3
TTC1	22	0.902693	4
OR10W1	23	1.18528	3
UBE2Q1	24	0.906118	4
FBXL21	25	1.01763	4
FIBP	26	1.08841	3
PALD1	27	1.62218	3
TMEM231	28	1.31684	3
FAM57B	29	1.0858	3
C10orf128	30	0.87654	4
ZNF417	31	0.899485	4
SPCS3	32	1.07123	3
CCDC97	33	1.04027	3
KATNA1	34	1.12978	3
PRSS42	35	1.07842	3
COL17A1	36	0.943756	4
MICALL1	37	1.01294	3
EIF3A	38	0.999239	3
TRPC4	39	1.02819	3
MED30	40	1.10368	3
HLA-C	41	0.999188	3
ASB7	42	0.906047	4
ROMO1	43	1.01502	3
NHLRC1	44	0.904565	4
GALNT2	45	0.819983	4
H2AFB2	46	0.888488	4
RNF225	47	1.05506	3
CRK	48	1.22403	3
PKD1	49	0.843695	4
BEST3	50	0.80587	4
PHC2	51	0.986973	3

KCNA7	52	1.37561	3
PLEKHG6	53	2.35719	2
NPIPA7	54	0.972726	3
SORD	55	0.960852	3
SPG20	56	0.855874	4
ATP6V1E2	57	0.982888	3
FLG	58	0.998215	3
ABT1	59	0.955187	3
RNF7	60	0.94169	4
MXI1	61	0.817274	4
NRAP	62	0.992491	4
KANSL1	63	1.00645	3
ATAD3B	64	1.02011	3
C1QTNF8	65	0.944534	3
LAMP3	66	0.789645	4
HDLBP	67	1.0039	3
RPL19	68	0.940305	3
HYAL2	69	1.73656	2
SLC6A5	70	0.820064	4
RANBP3	71	1.04526	3
OPRD1	72	0.800522	4
FOXD2	73	0.963396	3
PROX1	74	1.13765	3
CTF1	75	1.02116	3
PDGFD	76	1.01201	3
SLC25A28	77	1.61938	2
CRISP2	78	0.887361	4
F8A3	79	1.57944	2
MORN2	80	0.972209	3
CDK6	81	1.04648	3
PHB2	82	1.53832	2
ARFGAP1	83	1.21555	3
PTPRJ	84	0.923228	3
BEX5	85	1.52177	2
MORC2	86	0.884634	4
OSBPL8	87	0.931885	3
LTV1	88	0.833536	4
ATP5G3	89	1.00704	3
GPR50	90	0.988444	3
GLIPR1L1	91	1.478	2
HMGCS1	92	1.47568	2
SNCG	93	1.46522	2
DCP1A	94	1.4201	2
UBQLN1	95	0.947571	3
GPR84	96	1.40183	2
LOXHD1	97	1.39804	2
KLK4	98	1.34999	3
FAM174B	99	1.41027	2
LRRC36	100	0.904245	3

Supplementary Table 2: qPCR primers

qPCR primers	Forward Primer	Reverse Primer
MLV LTR	AGGGTCTCCTCTGAGTGATTGACT	TCGGACAGACACAGATAAGTTGCT
MLV 2LTR	AGGGTCTCCTCTGAGTGATT	ATGGTGTGTGGAGGAGTATAAAG
MYT1	AGGCACCTTCTGTTGGCCGA	AGGCAGCTGCCTCC GTACA
betaGlobin	CAGAGCCATCTATTGCTTAC	GCCTCACCACCAACTTCATC
GAPDH	CAATTCCCATCTCAGTCGT	TAGTAGCCGGGCCCACTTT
SETDB1	AGGAACTTCGGCATTTCATCG	TGTCCCGGTATTGTAGTCCCA
SETDB2	TGCTCTGGTGCTTGTCTGATG	TGCATGTCGTCTTTGGAAGTG
SUV39H1	CCTGCCCTCGGTATCTCTAAG	ATATCCACGCCATTTCACCAG
SUV39H2	TCTATGACAACAAGGGAATCACG	GAGACACATTGCCGTATCGAG
EHMT1	GCTGTGTGAAAACCGAGCTG	TCCGCTATCCGAGTTAGTGTG
EHMT2	GGGCGGGAAAATCACCTCC	CACTCATGCGGAAATGCTGTAT
EZH2	AATCAGAGTACATGCGACTGAGA	GCTGTATCCTTCGCTGTTTCC