

Supplemental Table 1

Human genome-wide

Library	Type	gRNAS	gRNAs per gene	Addgene catalog number
Activity-optimized genome-wide library	Knockout	187,535	10	1000000100
Broad GPP Brunello	Knockout	76,441	4	73179 73178
Gattinara	Knockout	40,964	2	136986
Human GeCKO v2	Knockout	123,411	6	1000000048 1000000049
Human genome-wide library v1	Knockout	77,406	4	69763
Human improved genome-wide library v1	Knockout	90,709	5	67989
Reduced Double -RNA Library	Knockout	59,576	3	137999
sgRNA iBAR library	Knockout	58,630	3	140633
Mini-human AsCpf1-based Library	Knockout	17,032 arrays	3-4	130630
Toronto KnockOut – Version 1	Knockout	176,500	12	1000000069
Toronto KnockOut – Version 3	Knockout	70,948	4	90294 125517
Two plasmid human activity-optimized genome-wide library	Knockout	187,536	10	1000000095
Broad GPP Calabrese p65-HSF	Activation	113,238	6	92379 92380
CRISPRa-v2	Activation	104,540 209,080	5 10	83978 1000000091
lncRNA Activation Library	Activation	96,458	10	1000000106
SAM v1 – 3 plasmid system	Activation	70,290	3	1000000057 1000000074
SAM v2 – 2 plasmid system	Activation	70,290	3	1000000078
Broad GPP Dolcetto	Inhibition	113,526	6	92385 92386
CRISPRi-v2	Inhibition	104,535 209,070	5 10	83969 1000000090

Mouse genome-wide

Library	Type	gRNAS	gRNAs per gene	Addgene catalog number
Broad GPP Brie	Knockout	78,637	4	73632 73633
Gouda	Knockout	44,155	2	136987
Mouse GeCKO v2	Knockout	130,209	6	1000000052 1000000053
Mouse improved genome-wide library v1	Knockout	90,230	5	67988
Mouse Toronto KnockOut (mTKO)	Knockout	19,463	~5	159392 159393
Retroviral Knockout Library	Knockout	90,230	5	104861
Two plasmid mouse activity-optimized genome-wide library	Knockout	188,509	10	1000000096
Broad GPP Caprano p65-HSF	Activation	134,076	6	92383 92384
CRISPRa-v2	Activation	107,105 214,210	5 10	83996 1000000093
SAM v1 – 3 plasmid system	Activation	69,716	3	1000000075
Broad GPP Dolomiti	Inhibition	134,560	6	104090 104091
CRISPRi-v2	Inhibition	107,415 214,830	5 10	83987 1000000092

Human sub-library

Library	Type	gRNAS	gRNAs per gene	Addgene catalog number
Bassik Knockout Library	Knockout	Varies	10	101926-101934
Bradley Human CRISPR Poison Exon Knockout Library	Knockout	9,508	~9 pairs/ exon	138084
Broad GPP kinome Brunello	Knockout	3,052	4	75314 75315 75312 75313
Enriched subpools (kinase, nuclear, ribosomal, cell cycle)	Knockout	Varies	10	51043-51048

Focused Ras Synthetic Lethal Human CRISPR Knockout Library	Knockout	6,661	50	92352
Epigenetic Knockout Library	Knockout	20,051	8	162256
Interferon-Stimulated Gene Knockout Library	Knockout	15,416	8	125753
Metabolic Gene Knockout Library	Knockout	30,290	10	110066
DNA Binding Domain-Focused Knockout Library	Knockout	8,658	6	123334
Kinase Domain-Focused Knockout Library	Knockout	3,051	6	117725
lncRNA Splicing-targeting Library	Knockout	126,773	Varies	119977
mTORC1 Focused Library	Knockout	7,501	10	164084
miRNA Knockout Library	Knockout	8,382	4-5	112200
Paired-guide RNA (pgRNA) Library for Long Non-coding RNAs (lncRNAs)	Knockout	12,472 pairs	Varies	89640
SLC Knockout Library	Knockout	2,609	6	132552
Transcription Factor Knockout Library	Knockout	11,364	~7	162275
Neelamegham GlycoGene Library	Knockout	3,637	10	140961
RNA-Binding Protein Pooled Knockout Library	Knockout	12,472	10	141438
CHyMERa Paralog & Dual-targeting hgRNA library	Knockout	92,746	Varies	155199
CHyMERa Exon-deletion hgRNA library	Knockout	91,948	Varies	155200
hCRISPRa-v2	Activation	Varies	5	83980-83986
Membrane Protein Activation Library	Activation	58,570	7-14	113345
SLC Activation Library	Activation	3,342	6	132561
CRiNCL - Human CRISPRi Non-coding Libraries	Inhibition	Varies	10	86538-86550
hCRISPRi-v2	Inhibition	Varies	5	83971-83977
CRISPRi titration libraries	Inhibition	Varies	Varies	136478 136479

Mouse sub-library

Library	Type	gRNAs	gRNAs per gene	Addgene catalog number
Bassik Knockout Library	Knockout	Varies	10	1000000121-1000000130
Broad GPP kinome Brie	Knockout	2,852	4	75317 75316
CRISPR/Cas9-assisted Removal of Mitochondrial DNA (CARM)	Knockout	395	N/A	82480
Cardiac Transcriptional Regulators Library	Knockout	14,671	6	138015
Metabolic Gene Library	Knockout	22,909	8	160129
Metastasis CRISPR-Cpf1(Cas12a) Double Knockout Library	Knockout	11,934 arrays	4	123361
SLC Knockout Library	Knockout	2,384	6	141436
Tumor Suppressor Gene Knockout Library	Knockout	286	4	113584 113585
Validation (mVAL) Library	Knockout	182	4	159391
mCRISPRa-v2 libraries	Activation	Varies	5	83998-84004
Transcription Factor Activation Library	Activation	51,762	20	122131
mCRISPRi-v2 libraries	Inhibition	Varies	5	83989-83995