

Product Analysis Certificate

CRISPR Mouse Genome 80K Knockout Library (Plasmid)
Cat.# KOMGW-80K-P



CRISPR Mouse Genome 80K Knockout Library

Shipment Contents: CRISPR Mouse Genome 80K Knockout Library (Plasmid)
— Store at -20°C

Description:

Cellecta's CRISPR sgRNA libraries are pooled lentiviral sgRNA libraries constructed in third-generation lentiviral vectors and optimized for CRISPR genetic screens in pooled format. The sgRNA designs we use result in a high percentage of functional sequences, typically at least 70% of the sgRNAs. The vast majority of sgRNA constructs in the library are represented equally, with the difference in concentrations usually not exceeding one order of magnitude between the most and the least represented. Typically, 90% of the population of sgRNA constructs is present within a 3-fold range.

Our optimized sgRNA expression cassettes are optimized for Next-Generation Sequencing (NGS) and identification of sgRNAs. Using the Illumina NextSeq or HiSeq NGS platform, sgRNA are identified and can be converted to lists of sgRNA with enumerated sequencing data.

The CRISPR Mouse Genome 80K Knockout Library consists of a single module targeting nearly all protein-encoding genes:

- All mouse protein-coding genes covered—approximately 19,600 gene targets
- Each gene is covered by 4 sgRNAs designed to target functional domains and conserved transcript regions
- Controls include: 993 Non-Targeting and 28 Intron-targeting

The library is constructed in Cellecta's pRSG16-U6-sg-UbiC-TagRFP-2A-Puro lentiviral vector that expresses sgRNA under a wild-type U6 promoter and TagRFP (Evrogen) fluorescent protein and Puro resistance gene under a human ubiquitin C promoter.

The plasmid library can be packaged into VSV-G pseudotyped viral particles using most commercially-available second or third-generation packaging mixes or Cellecta's second-generation psPAX2/pMD2.G packaging plasmid mix (Ready-to-use Packaging Plasmid Mix, Cat.# CPCP-K2A, 250 µg). The titer of packaged libraries can be functionally determined by transduction of 293T cells and FACS of RFP-positive transduced cells.

Two-Vector system libraries require a separate Cas9-only vector, available separately from Cellecta:

<u>Cas9 Expression Vectors</u>	<u>Plasmid Cat.#</u>	<u>Virus Cat.#</u>
CRISPR Cas9 pRCCH-CMV-Cas9-2A-Hygro	SVC9-PS	SVC9-VS
CRISPR Cas9 pRCCB-CMV-Cas9-2A-Blast	SVC9B-PS	SVC9B-VS
CRISPR Cas9 pRCCG-CMV-Cas9-2A-TagGFP2	SVC9G-PS	SVC9G-VS
CRISPR Cas9 pRCCN-CMV-Cas9-2A-Neo	SVC9N-PS	SVC9N-VS
CRISPR Cas9 pRCCP-CMV-Cas9-2A-Puro	SVC9P-PS	SVC9P-VS

Fluorescence Marker: TagRFP (ex./em.: 560/590nm)
Biosafety Level: BSL-2
Storage: -20°C
Shelf Life: 2 years from date of receipt
Shipping Conditions: Blue or Dry Ice

Product Information

The user manual, gene list, and vector map/sequence are available on our website:
<https://www.cellecta.com/crispr-mouse-genome-wide-library/>

The sgRNA library sequences file with NGS QC is provided by email upon shipment.
Please contact Cellecta at orders@cellecta.com if you have not received it.

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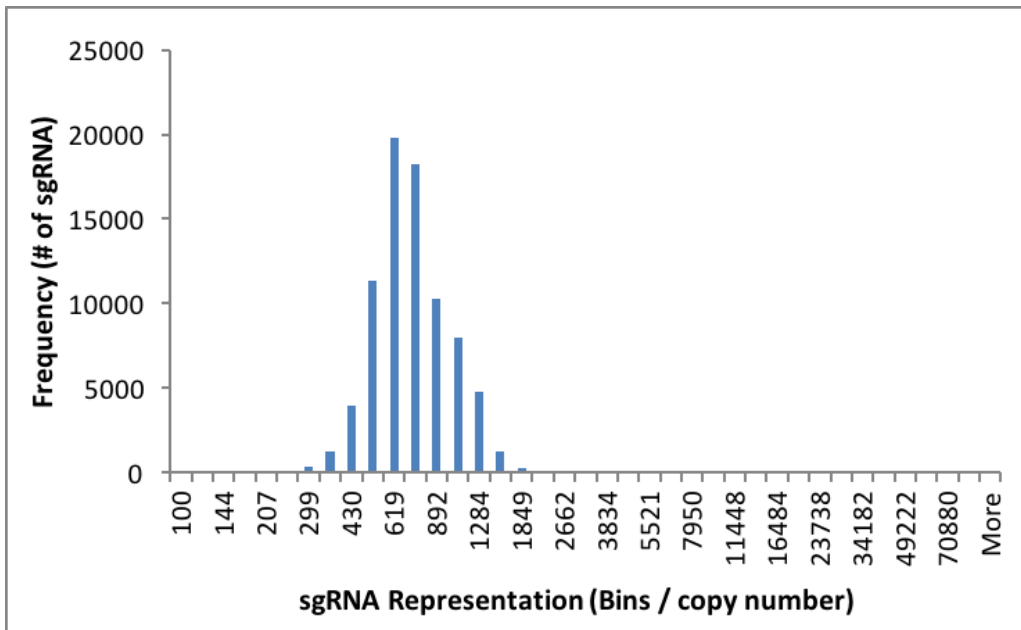
Contents

Catalog #	Description
KOMGW-80K-P	CRISPR Mouse Genome 80K Knockout Library in pRSG16-U6-sg-HTS6C-UbiC-TagRFP-2A-Puro Plasmid, 200 µg: 200 µg , 1.0 µg/µl (200 µl × 1 tube) Lot# 17101101; Store at -20°C

Sequence File Name (sgRNA Sequences and Annotations, Clone QC Data, & NGS QC Data):
 Collecta-SEQ-CRISPR-KOMGW-80K-Library-pRSG16-17101101ngp.xlsx.

Quality Control

Library Representation



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Individual Clone Sequencing Data (with NGS-based mutation rate estimate)

Library:	CRISPR Mouse Genome 80K Knockout Library
Plasmid Library Lot #:	17101101
Number of Independent Clones:	90 x 10 ⁶
Number of random "good" clones checked:	22
Single Insert Rate:	>95%
Number of clones with at least one mutation, deletion, or insertion:	0
Mutation / Deletion / Insertion Rate (based on clone sequencing):	0.00%
Estimated % of Inserts without any mutations, deletions, or insertions in <u>gRNA</u> portion (based on clone sequencing):	>95%
*Mutation / Deletion / Insertion Rate (based on NGS—more accurate):	0.2%
*Estimated % of Inserts without any mutations, deletions, or insertions in <u>gRNA</u> portion (based on NGS—more accurate):	96%

NGS Prep of Screening Samples

Cellecta provides the following NGS products and services. For pricing, please inquire.

Cat.#	Description	Quantity
LNGS-120	NGS Prep Kit for sgRNA Libraries in pRSG16/17 (KOHGW)	Kit for 6-48 samples (48 preps of 50 µg each, 12 multiplex)
CANA-SQD	NGS of DNA from Genetic Screen	Service (per DNA sample)

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Terms and Conditions

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