

Product Analysis Certificate

Mouse Genome-Wide CRISPRi sgRNA Library (Plasmid)
Cat.# KIMGW-109-P



Mouse Genome-Wide CRISPRi sgRNA Library

Shipment Contents: Mouse Genome-Wide CRISPRi sgRNA Library (Plasmid)
— Store at -20°C

Description:

Cellecta's CRISPRi sgRNA libraries are pooled lentiviral sgRNA libraries constructed in third-generation lentiviral vectors and optimized for CRISPRi genetic screens in pooled format. The vast majority of sgRNA constructs in the library are represented equally, with the difference in concentrations usually not exceeding two orders of magnitude between the most and the least represented. Typically, virtually 100% of the population of sgRNA constructs is present within a 10 to 100-fold range. We guarantee that at least 90% are present within a 100-fold range and 70% are present within a 10-fold range.

Our sgRNA expression cassettes are optimized for Next-Gen Sequencing 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.

Cellecta CRISPRi sgRNA library screens require cells to first be transduced with a separate lentiviral vector expressing dCas9-KRAB. We recommend using Cellecta's dCas9 expression plasmids:

<u>dCas9 Expression Plasmids</u>	<u>Plasmid Cat.#</u>	<u>Virus Cat.#</u>
CRISPRi dCas9 pRDKCCB-CMV-dCas9-KRAB-2A-Blast	SVKRABC9B-PS	SVKRABC9B-VS
CRISPRi dCas9 pRDKCCH-CMV-dCas9-KRAB-2A-Hygro	SVKRABC9H-PS	SVKRABC9H-VS

The Mouse Genome-Wide CRISPRi sgRNA Library consists of a single module targeting nearly all protein-encoding genes:

- Single-Module library expresses ~109,000 sgRNA
- Targets almost 20,000 mouse protein-coding genes
- Each gene is targeted by 5 sgRNAs designed against the promoter region (designs based on Horbeck, et al., eLife 2016;5:e19760 DOI: 10.7554)
- Over 4,200 non-targeting sgRNA controls

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) and Puro resistance genes under a human ubiquitin C promoter.

The titer of packaged libraries can be functionally determined by transduction of target cells at low MOI and FACS of RFP-positive cells.

Biosafety Level: BSL-2

Storage: -20°C

Shelf Life: 2 years from date of receipt

Shipping Conditions: Blue or Dry Ice

Product Information (Cellecta Website):

User Manual: <https://www.cellecta.com/product-manuals-and-certificates/>
Vector Info (Sequence, cassette, etc): <https://www.cellecta.com/vector-information/>
Target Gene List, sgRNA sequences: Please contact Cellecta at orders@cellecta.com.

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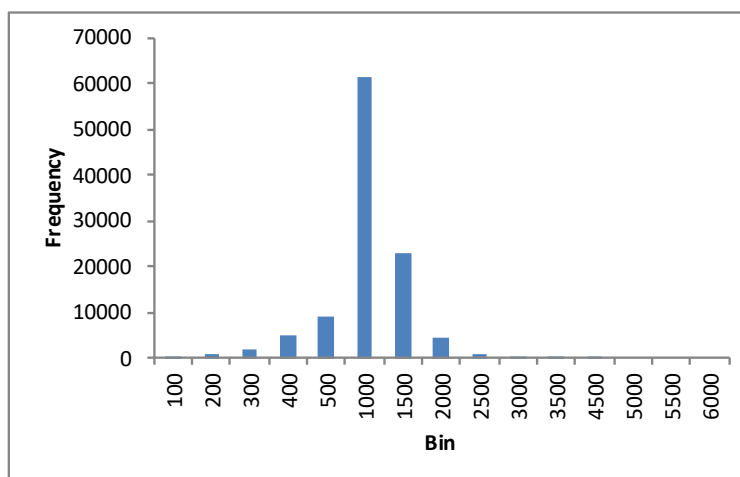
Contents

Catalog #	Description
KIMGW-109-P	Mouse Genome-Wide CRISPRi sgRNA Library in pRSG16-U6-sg-UbiC-TagRFP-2A-Puro <u>Plasmid, 200 µg:</u> 200 µg, 1.0 µg/µl (200 µl × 1 tube) Lot# 180124002; Store at -20°C

Plasmid Library Information

Plasmid Library Lot #:	180124002
Library Complexity (number of clones):	24 × 10 ⁶
Mutation / Deletion / Insertion Rate (based on NGS):	<0.4%
Estimated % of Inserts without any mutations, deletions, or insertions in <u>gRNA</u> portion (based on NGS):	>90%

Library Representation



Sequence File Name (sgRNA Sequences and NGS QC Data)

Collecta-SEQ-CRISPRi-KIMGW-109K-Library-pRSG16-180124002ngp.xlsx

NGS Prep of Screening Samples

Collecta 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	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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