

## Product Analysis Certificate

Mouse Genome-Wide CRISPRa sgRNA Library (Packaged), 1 x 10<sup>9</sup> TU  
Cat.# KAMGW-109-V9



### Mouse Genome-Wide CRISPRa sgRNA Library

**Shipment Contents:** Mouse Genome-Wide CRISPRa sgRNA Library (Packaged), 1 x 10<sup>9</sup> TU  
— Store at -80°C

#### Description:

Cellecta's CRISPRa sgRNA libraries are pooled lentiviral sgRNA libraries constructed in third-generation lentiviral vectors and optimized for CRISPRa 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 CRISPRa sgRNA library screens require cells to first be transduced with a separate lentiviral vector expressing dCas9-VPH. We recommend using Cellecta's dCas9 expression plasmids:

| <u>dCas9 Expression Plasmid</u>              | <u>Plasmid Cat.#</u> | <u>Virus Cat.#</u> |
|----------------------------------------------|----------------------|--------------------|
| CRISPRa dCas9 pRDVCCB-CMV-dCas9-VPH-2A-Blast | SVVPHC9B-PS          | SVVPHC9B-VS        |

The Mouse Genome-Wide CRISPRa 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 provided by Cellecta is functionally determined by transduction of 293T cells at low MOI and FACS of RFP-positive cells.

**Biosafety Level:** BSL-2

**Storage:** -80°C

**Shelf Life:** 1 year from date of receipt

**Shipping Conditions:** 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](mailto:orders@cellecta.com).

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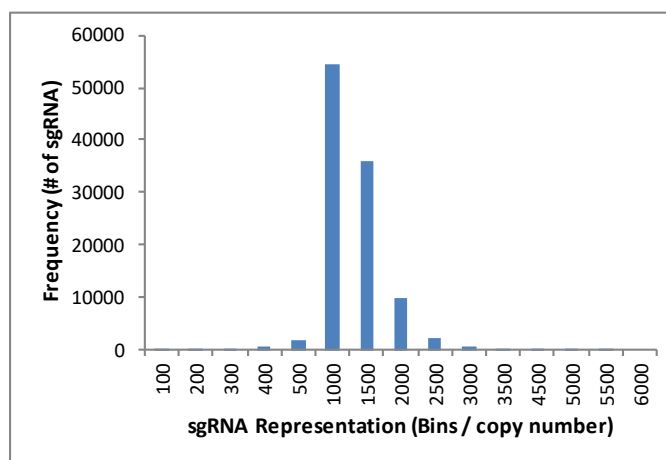
### Contents

| Catalog #    | Description                                                                                                                                                                                                                                                                                             |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KAMGW-109-V9 | <b>Mouse Genome-Wide CRISPRa sgRNA Library</b><br>in pRSG16-U6-sg-UbiC-TagRFP-2A-Puro<br>Packaged, $1 \times 10^9$ TU:<br>$1.12 \times 10^9$ TU, $1.67 \times 10^9$ TU/ml (670 $\mu$ l total: 50 $\mu$ l $\times$ 13 vials, 5 $\mu$ l $\times$ 4 vials)<br>Lot# 180124003; Store at $-80^\circ\text{C}$ |

### Plasmid Library Information

|                                                                                                               |                  |
|---------------------------------------------------------------------------------------------------------------|------------------|
| Plasmid Library Lot #:                                                                                        | 18010501         |
| Library Complexity (number of clones):                                                                        | $45 \times 10^6$ |
| 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-CRISPRa-Mouse-KAMGW-109K-Library-18010501ngp.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<br>(48 preps of 50 $\mu$ g each, 12 multiplex) |
| CANA-SQD | NGS of DNA from Genetic Screen                | Service (per DNA sample)                                            |

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## Terms and Conditions

### Cellecta, Inc. Limited License

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#### Life Technologies Corporation End-User Label License for the use of Lentiviral Expression System:

"This product or service (based upon the Lentiviral Expression System) is sublicensed from Life Technologies Corporation under U.S. Patent Nos. 5,686,279; 5,834,256; 5,858,740; 5,994,136; 6,013,516; 6,051,427; 6,165,782; 6,218,187; 6,428,953; 6,924,144; 7,083,981 and 7,250,299 and corresponding patents and applications in other countries for internal research purposes only. Use of this technology for gene therapy applications or bioprocessing other than for nonhuman research use requires a license from GBP IP, LLC. Please contact GBP IP, LLC 537 Steamboat Road, Suite 200, Greenwich, CT 06830. Use of this technology to make or sell products or offer services for consideration in the research market requires a license from Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008."

#### Evrogen IP JSC End-User Label License for the use of lentiviral shRNA constructs comprising TagRFP-encoded gene:

"This product is for internal non-commercial research use only. No rights are conveyed to modify or clone the gene encoding fluorescent protein contained in this product. The right to use this product specifically excludes the right to validate or screen compounds. For information on commercial licensing, contact Evrogen Licensing Department, email: [license@evrogen.com](mailto:license@evrogen.com)".

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