

Product Analysis Certificate

Human Genome-Wide CRISPRi sgRNA Library (Packaged), 2 x 10⁸ TU
Cat.# KIHGW-106-V9



Human Genome-Wide CRISPRi sgRNA Library

Shipment Contents: Human Genome-Wide CRISPRi sgRNA Library (Packaged), 1 × 10⁹ TU
— Store at -80°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 Human Genome-Wide CRISPRi sgRNA Library consists of a single module targeting nearly all protein-encoding genes:

- Single-Module library expresses ~106,000 sgRNA
- Targets almost 19,000 human 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)
- ~3,700 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.

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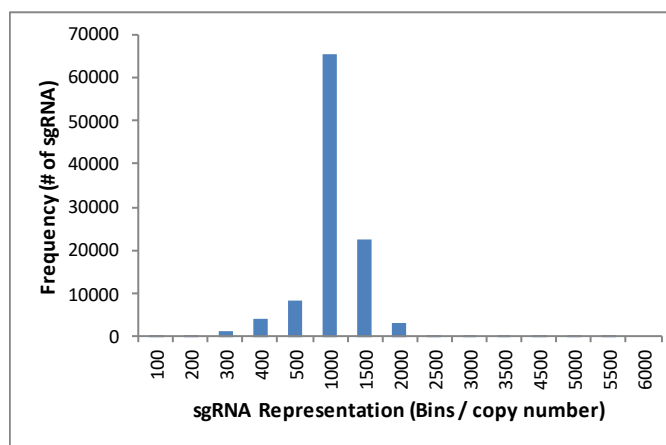
Contents

Catalog #	Description
KIHGW-106-V9	Human Genome-Wide CRISPRi sgRNA Library in pRSG16-U6-sg-UbiC-TagRFP-2A-Puro Packaged, 1 x 10 ⁹ TU: 1.09 × 10⁸ TU , 1.50 × 10 ⁹ TU/ml (725 µl total: 50 µl × 14 vials, 5 µl × 5 vial) Lot# 181128001; Store at -80°C

Plasmid Library Information

Plasmid Library Lot #:	180124001
Library Complexity (number of clones):	40 x 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-KIHGW-106K-Library-pRSG16-180124001ngp.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

Cellecta, Inc. Limited License

Cellecta grants the end user (the "Recipient") of the Human Genome-Wide CRISPRi sgRNA Library (the "Product") a non-transferable, non-exclusive license to use the reagents for internal research use only as described in the enclosed protocols; in particular, research use only excludes and without limitation, resale, repackaging, or use for the making or selling of any commercial product or service without the written approval of Cellecta, Inc. -- separate licenses are available for non-research use or applications. The Product is not to be used for human diagnostics or included/used in any drug intended for human use. Care and attention should be exercised in handling the Product by following appropriate research laboratory practices.

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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:

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