

Product Analysis Certificate

Human Genome-Wide CRISPRa sgRNA Library (Packaged), 1 x 10⁹ TU
Cat.# KAHGW-106-V9



Human Genome-Wide CRISPRa sgRNA Library

Shipment Contents: Human Genome-Wide CRISPRa sgRNA Library (Packaged), 1 x 10⁹ 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 Human Genome-Wide CRISPRa 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.

Product Analysis Certificate

Human Genome-Wide CRISPRa sgRNA Library (Packaged), 1×10^9 TU
 Cat.# KAHGW-106-V9



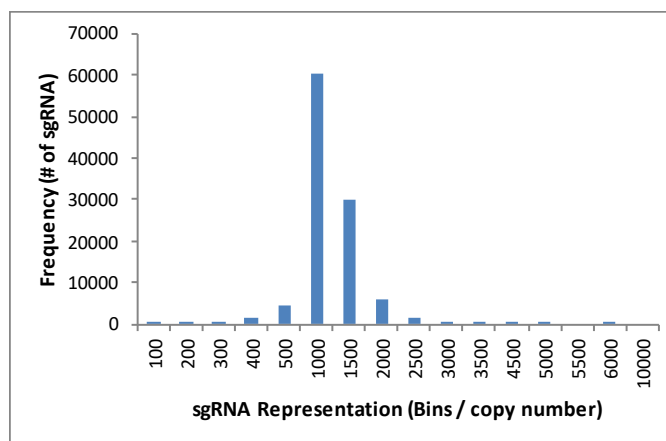
Contents

Catalog #	Description
KAHGW-106-V9	Human Genome-Wide CRISPRa sgRNA Library in pRSG16-U6-sg-UbiC-TagRFP-2A-Puro Packaged, 1×10^9 TU: 1.09×10^9 TU, 1.41×10^9 TU/ml (775 μ l total: 50 μ l \times 15 vials, 5 μ l \times 5 vials) Lot# 191106001; Store at -80°C

Plasmid Library Information

Plasmid Library Lot #:	17122701
Library Complexity (number of clones):	55×10^6
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-KAHGW-106K-Library-pRSG16-17122701ngp.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 μ g each, 12 multiplex)
CANA-SQD	NGS of DNA from Genetic Screen	Service (per DNA sample)

Product Analysis Certificate

Human Genome-Wide CRISPRa sgRNA Library (Packaged), 1 x 10⁹ TU
Cat.# KAHGW-106-V9



Terms and Conditions

Cellecta, Inc. Limited License

Cellecta grants the end user (the "Recipient") of the Human Genome-Wide CRISPRa 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.

Cellecta's liability is expressly limited to replacement of Product or a refund limited to the actual purchase price. Cellecta's liability does not extend to any damages arising from use or improper use of the Product, or losses associated with the use of additional materials or reagents. This limited warranty is the sole and exclusive warranty. Cellecta does not provide any other warranties of any kind, expressed or implied, including the merchantability or fitness of the Product for a particular purpose. Use of the Product for any use other than described expressly herein may be covered by patents or subject to rights other than those mentioned. Cellecta disclaims any and all responsibility for injury or damage that may be caused by the failure of the Recipient or any other person to use the Product in accordance with the terms and conditions outlined herein.

The Recipient may refuse these licenses by returning the enclosed Product unused. By keeping or using the enclosed Product, you agree to be bound by the terms of these licenses. The laws of the State of California shall govern the interpretation and enforcement of the terms of these Licenses.

Limited Use Licenses

The Recipient acknowledges that Product has been developed by Cellecta based on licenses from Third Parties and agrees with the Terms of Limited Use for the Recipient provided by the Third Parties:

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".

Terms and Conditions are also available online at <https://www.cellecta.com/company/legal-information/terms-and-conditions/>.

© 2019 Cellecta, Inc. All Rights Reserved.

Trademarks

CELLECTA is a registered trademark of Cellecta, Inc.