

Product Analysis Certificate

CRISPR Human Genome Knockout Library, Module 1 (Plasmid)
Cat. # KOHW-M1-P



CRISPR Human Genome Knockout Library, Module 1 (55K)

Shipment Contents: CRISPR Human Genome Knockout Library, Module 1 (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 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 optimized sgRNA expression cassettes are optimized for Next-Gen Sequencing and identification of sgRNAs. Using the Illumina HiSeq or NextSeq NGS platform, sgRNA are identified and can be converted to lists of sgRNA with enumerated sequencing data.

Cellecta CRISPR sgRNA library screens require cells to first be transduced with a separate lentiviral vector expressing SpCas9 (Cas9 from *Streptococcus pyogenes*). We recommend using Cellecta's Cas9-Blast vector (Cat.# SVC9B-PS, 25 µg plasmid, or Cat.# SVC9B-VS, 1 x 10⁶ TU packaged virus).

The CRISPR Human Genome Knockout Library consists of 3 modules and targets nearly all protein-encoding genes:

- Each module covers approximately 6,500 genes
- Each gene is targeted by 4-8 sgRNA for a total of up to 55,000 sgRNA per module
- Library targets nearly all (more than 19,000) protein encoding genes

Human Module 1 targets signal transduction genes:

- Members of major signal transduction pathways
- Top-ranking genes from the Cancer Genome Atlas
- Approved drug targets
- Many disease-associated genes

The libraries are 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 libraries 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 provided by Cellecta can be functionally determined by transduction of 293T cells and FACS of RFP-positive transduced cells.

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Biosafety Level: BSL-2

Storage: -20°C

Shelf Life: 2 years from date of receipt

Shipping Conditions: Room Temperature, Blue Ice, or Dry Ice

Product Information (Cellecta Website):

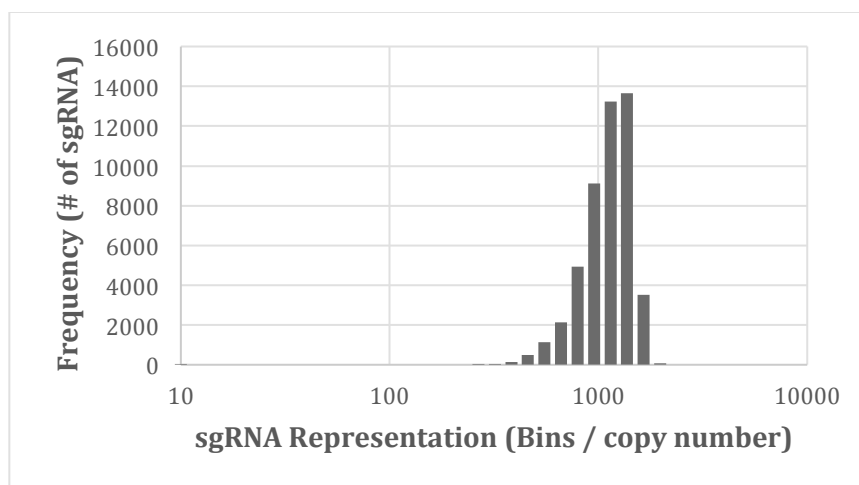
User Manual: <http://www.cellecta.com/product-manuals-and-certificates/>
Target Gene List: <http://www.cellecta.com/human-crispr-genome-wide...>
Vector Info (Sequence, cassette, etc): <http://www.cellecta.com/vector-information/>
sgRNA sequences: Please contact Cellecta at orders@cellecta.com.

Contents:

Catalog #	Description
KOHGW-M1-P	CRISPR Human Genome Knockout Library, Module 1 (55K) 55K-KOHGW-M1 in pRSG16-U6-sg-UbiC-TagRFP-2A-Puro Plasmid, 200 µg: 200 µg , 1.0 µg/µl (200 µl × 1 tube) Lot# 15082402; Store at -20°C

Quality Control

Library Representation



Please see Excel file provided with the library: **SEQ-CRISPR-KOHGW-M1-pRSG16-NGS-QC.xlsx**.

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Individual Clone Sequencing Data

The sequencing data shown is that of the Plasmid Library.

Library:	CRISPR Human Genome Knockout Library Module 1
Plasmid Lot #:	15082402
Library Complexity (number of clones):	22×10^6
Number of random clones picked:	24
Correct Structure:	>95%
Number of clones with at least one mutation, deletion, or insertion:	3
Mutation / Deletion / Insertion Rate:	0.48%
Estimated % of Inserts without any mutations, deletions, or insertions in gRNA portion and considered to be functional:	>90%

Cellecta now offers sample prep, Next-Gen Sequencing, and data analysis services. Please contact us at sales@cellecta.com or visit our website at <http://www.cellecta.com/next-gen-sequencing-and-analysis/> for more information.

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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."

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