CRISPR Human Genome 80K Knockout Library

Shipment Contents: CRISPR Human Genome 80K Knockout Library (Packaged), 2 × 10^8 TU
— **Store at -80°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 NextSeq or HiSeq 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 10^6 TU packaged virus).

The CRISPR Human Genome Knockout Library consists of a single module targeting nearly all protein-encoding genes:

- The library covers approximately 19,000 genes
- Each gene is targeted by 4 sgRNA
- Controls include: 500 non-targeting; 80 intron-targeting; and 40 positive-control sgRNA against 10 targets

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):

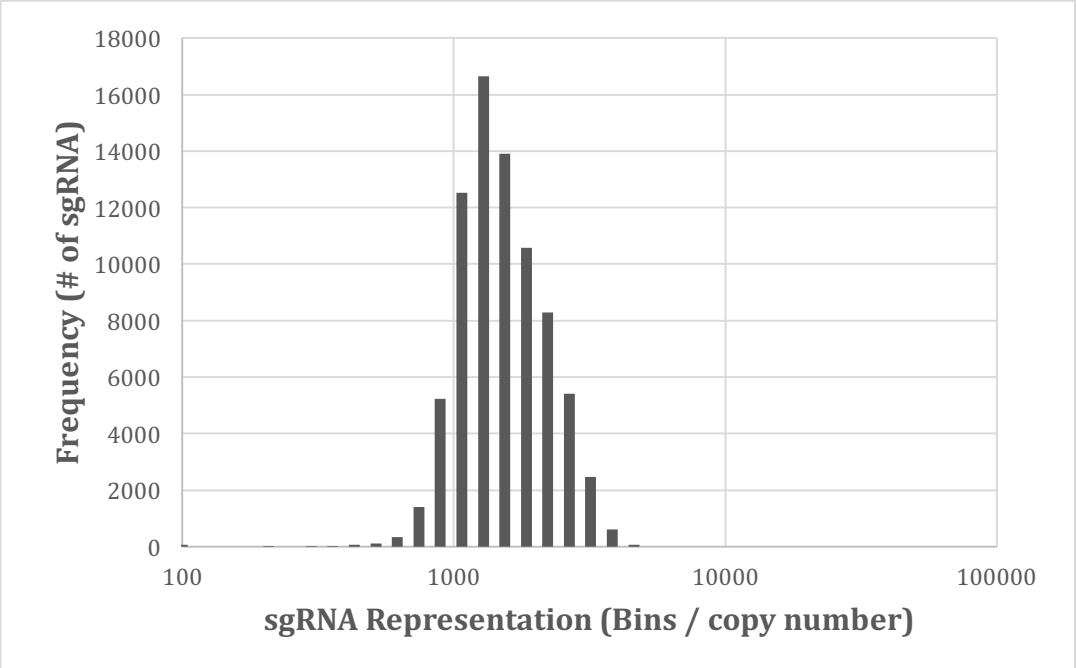
User Manual: https://www.cellecta.com/product-manuals-and-certificates/
Vector Info (Sequence, cassette, etc): https://www.cellecta.com/vector-information/
Target Gene List, sgRNA sequences: Please contact Cellecta at orders@cellecta.com.

Contents:

Catalog #	Description
KOHGW-80K-V8	**CRISPR Human Genome 80K Knockout Library** in pRSG16-U6-sg-UbiC-TagRFP-2A-Puro Packaged, 2 x 10^8 TU: **2.32 × 10^8 TU**, 9.08 × 10^8 TU/ml (255 µl total: 50 µl × 5 vials, 5 µl × 1 vial) Lot# 16110922; *Store at -80°C*

Quality Control

Library Representation



Please see Excel file provided with the library:
Cellecta-SEQ-CRISPR-KOHGW-80K-pRSG16-NGS-QC.xlsx.

Individual Clone Sequencing Data

The sequencing data shown is that of the Plasmid Library.

Library:	**CRISPR Human Genome 80K Knockout Library**
Plasmid Lot #:	16110923
Library Complexity (number of clones):	60 x 10^6
Number of random clones picked:	21
Correct Structure:	>95%
Number of clones with at least one mutation, deletion, or insertion:	2
Mutation / Deletion / Insertion Rate:	0.37%
Estimated % of Inserts without any mutations, deletions, or insertions in gRNA portion and considered to be functional (Based on Clone QC):	93%
Estimated % of Inserts without any mutations, deletions, or insertions in gRNA portion and considered to be functional (Based on NGS QC):	**98%**

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.

Terms and Conditions

Cellecta, Inc. Limited License
Cellecta grants the end user (the "Recipient") of the CRISPR Human Genome 80K Knockout 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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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:
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