

Product Analysis Certificate

CRISPR Human Genome 80K Knockout Library in EF1-Puro Vector (Packaged)
Cat.# KOHGW-EP-80K-V9



CRISPR Human Genome 80K Knockout Library in EF1-Puro Vector

Shipment Contents: CRISPR Human Genome 80K Knockout Library in EF1-Puro Vector (Packaged)
— 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 10⁶ 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 pRSGEP-U6-sg-HTS6C-EF1-Puro lentiviral vector that expresses sgRNA under a wild-type U6 promoter and Puro resistance genes under a human Elongation Factor-1a promoter.

The titer of packaged libraries provided by Cellecta is functionally determined by transduction of 293T cells at low MOI and Puro selection.

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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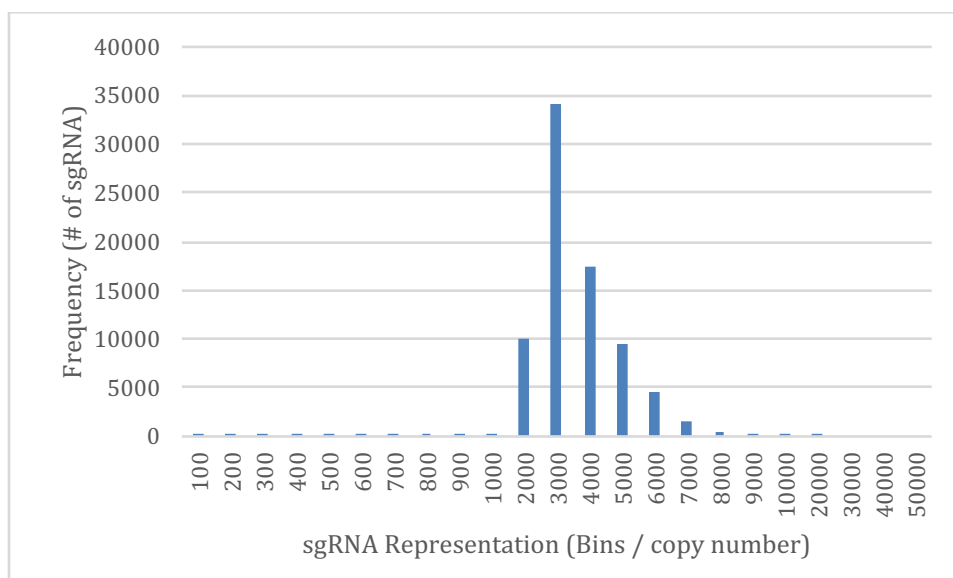


Contents:

Catalog #	Description
KOHGW-EP-80K-V9	CRISPR Human Genome 80K Knockout Library in EF1-Puro Vector in pRSGEP-U6-sg-HTS6C-EF1-Puro <u>Packaged, >1 x 10⁹ TU:</u> 1.12 × 10⁹ TU , 1.80 TU/ml (620 µl total: 50 µl × 12 tubes, 5 µl × 4 vials) Lot# 180731016; Store at -80°C

Quality Control

Library Representation



Library sgRNA Sequence File (sent with PAC)

Collecta-SEQ-CRISPR-KOHGW-80K-Library-pRSGEP-17122020.xlsx

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Individual Clone Sequencing Data

The sequencing data shown is that of the Plasmid Library.

Library:	CRISPR Human Genome 80K Knockout Library
Plasmid Lot #:	17122020
Library Complexity (number of clones):	80 x 10 ⁶
Number of random clones picked:	21
Correct Structure:	>95%
Number of clones with at least one mutation, deletion, or insertion:	3
Mutation / Deletion / Insertion Rate:	0.37%
Estimated % of Inserts without any mutations, deletions, or insertions in <u>gRNA</u> portion and considered to be functional (Based on Clone QC):	93%
Estimated % of Inserts without any mutations, deletions, or insertions in <u>gRNA</u> portion and considered to be functional (Based on NGS QC):	>91%

NGS Prep of Screening Samples

Cellecta provides the following options for preparing and sequencing your screening samples. For pricing, please inquire.

Cat.#	Description	Quantity
LNGS-120	NGS Prep Kit for sgRNA Libraries in pRSG16/17 (compatible with sgRNA Libraries in pRSGEP)	Kit for 6-48 samples (48 preps of 50ug each)
CANA-SQD	NGS of DNA from Genetic Screen	Service (per DNA sample)

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Terms and Conditions

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