

Product Analysis Certificate

Control Lentiviral CRISPR sgRNA Construct
sg_CopGFP_D1 Control in pRSGCCG-U6-sg-CMV-Cas9-2A-TagGFP2 (plasmid)
Cat.# SGCCTL-COP-pRSGCCG



Control Lentiviral CRISPR sgRNA Construct

Shipment Contents: Control Lentiviral CRISPR sgRNA Construct
sg_CopGFP_D1 Control in pRSGCCG-U6-sg-CMV-Cas9-2A-TagGFP2 (plasmid)
— Store at -20°C

Description:

Cellecta's single-vector CRISPR-Cas9 system can be used for knocking out gene expression *in vivo* or *in vitro* by using a combination of an sgRNA (single guide RNA) along with the Cas9 nuclease. Permanent 100% knockout can be achieved in virtually any cell line by using Cellecta's lentiviral-based CRISPR constructs. Expression of both the sgRNA and Cas9 is stable, and the system can be used in dividing or non-dividing cells or whole model organisms.

The Control Lentiviral CopGFP sgRNA Construct expresses an sgRNA that targets a variant of destabilized CopGFP. It does not target any known human, mouse, or rat genes.

The plasmid sgRNA construct 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:

- Cat.# CPCP-K2A, Ready-to-use Lentiviral Packaging Plasmid Mix, 250 µg (for 25 x 10-cm plates)

The titer of packaged constructs can be functionally determined by transduction of 293T cells and either FACS of RFP- or GFP-positive cells, antibiotic selection assay, or by PCR titering of integrated viral DNA.

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: <https://www.cellecta.com/product-manuals-and-certificates/>
Vector Info (Sequence, etc.): <https://www.cellecta.com/vector-information/>

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Contents:

Catalog #	Description
SGCCTL-COP-pRSGCCG	Control Lentiviral CRISPR sgRNA Expression Construct sg_CopGFP_D1 Control in pRSGCCG-U6-sg_CopGFP_D1-CMV-Cas9-2A-TagGFP2 (plasmid) RefSeq#: n/a, Gene ID: n/a 25 µg, 0.5 µg/µl (50 µl × 1 tube) Lot# 16042519; Store at -20°C
Target Sequence:	AAGATCGAGTGCCGCATCAC
Insert Sequence + tracrRNA:	ACCG AAGATCGAGTGCCGCATCAC GGTTTAAGAGCTATGCTGGAACAGCATAGCAAGTTTAAATAAGGCTAGTCC GTTATCAACTTGAAAAAGTGGCACCGAGTCGGTGCCTTTTTCG
Sequencing QC:	NNNTTCNNGGGTAGTTTGCAGTTTANATTATGTTTTAAATGGACTATCATATGCTTACCGTAACTTGAAAGTA TTTCGATTTCTTGGCTTTATATATCTTGTGGAAAGGACGAAACACCGAAGATCGAGTGCCGCATCACGTTTAAGA GCTATGCTGGAACAGCATAGCAAGTTTAAATAAGGCTAGTCCGTTATCAACTTGAAAAAGTGGCACCGAGTCGG TGCTTTTTTCGGAAGTGTAGAAGTCTGAACCTCGAGCAATTTAAAGAAAAGGGGGATTGGGGGTACAGTGCAG GGGAAAGAATAGTAGACATAATAGCAACAGACATACAA
Sequencing Primer:	ATTAGTACAAAATACGTGACGTAGAA (U6-3)

Structure of sgRNA designed by Cellecta:

5'-ACCG-20mer gRNA template(target sequence)-tracrRNA-TTCG-3'

Structure of Target Site (sense or antisense strand):

5'-NNNNNNNNNNNNNNNNNNNNNGG-3' (genomic target + PAM site)
5'-NNNNNNNNNNNNNNNNNNNN-3' (gRNA template, i.e. template DNA / construct insert)
3'-NNNNNNNNNNNNNNNNNNNN-5' (gRNA - RNA expressed from vector)

Example Genomic Target Site of sg_hPCNA_CO_5 control construct (sense strand):

5'-CCTGGTCCAGGGCTCCATCCTCAAGAAGGTGT-3' (genomic target + PAM site)
5'-CCAGGGCTCCATCCTCAAGA-3' (gRNA template, i.e. template DNA / construct insert)
3'-GGTCCCGAGGTAGGAGTTCT-5' (gRNA - RNA expressed from vector)

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