

## Product Analysis Certificate

Control Lentiviral shRNA Construct  
shNT in pRSITPGP-U6Tet-sh-hPGK-TetRep-2A-TagGFP2-2A-Puro  
Cat.# SHCTL-NT-PX (in pRSITPGP)



### Control Lentiviral shRNA Construct

**Shipment Contents:** Control Lentiviral shRNA Construct (Plasmid)  
shNT in pRSITPGP-U6Tet-sh-hPGK-TetRep-2A-TagGFP2-2A-Puro  
— Store at -20°C

#### Description:

Cellecta's shRNA constructs are lentiviral vectors expressing short-hairpin RNA for knockdown of target mRNA transcripts. The use of our proprietary shRNA design algorithm and database of validated shRNAs results in a high percentage of functional sequences, typically at least 70% knockdown efficiency for approximately 70% of the shRNA constructs. Results may vary between different cell types.

The non-targeting (NT) lentiviral shRNA construct expresses an shRNA sequence with no significant homology to any mammalian transcript.

The plasmid shRNA 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
SHCTL-NT-PX (in pRSITPGP)	<b>Control Lentiviral shRNA Expression Construct</b> shNT in pRSITPGP-U6Tet-sh-hPGK-TetRep-2A-TagGFP2-2A-Puro RefSeq#: n/a, Gene ID: n/a  <b>25 µg, 0.5 µg/µl (50 µl × 1 tube)</b> Lot# 17090101; Store at -20°C
Target Sequence:	CAACAAGATGAAGAGCACCAA
Insert (Hairpin) Seq.:	ACCGGCAACAAGATGGAGAGCACTAAGTTAATATTCATAGCTTGGTGCTCTTCATCTTGTGTTTT
Sequencing QC:	TBA
Sequencing Primer:	ATTAGTACAAAATACGTGACGTAGAA (U6-3)

### Design of Collecta shRNA Constructs:

ACCGG-21mer (**sense** w/ mismatch(es) \*) -GTTAATATTCATAGC (**loop**) -21mer (**antisense**) -TTTT

\* For some constructs, the sense portion of the shRNA may contain specific mismatches introduced by Collecta. We incorporate some mismatches in our library hairpins to improve stability and representation in a pooled-screening format. Although we have not observed any significant differences in efficacy between perfectly homologous shRNA sequences and those with 1-2 non-sequential mismatches, we typically use the same hairpin design for individual constructs to maintain sequence consistency with our functionally active library designs. *Note that this design may not apply in the case of customer-requested designs.*

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