## **Product Specification Sheet**

Product Name pLV-SFFV-dCas9-KRAB-PURO Lentiviral Vector

**Description** CRISPR (clustered regularly interspaced short palindromic repeats) interference

(CRISPRi) is a widely used genetic technique that allows targeted silencing of transcription in bacteria and mammalian cells. The CRISPRi system is comprised of a catalytically inactive Cas9 (dCas9) protein fused with a transcriptional repressor such as the Krüppel-associated box (KRAB) repressor and a customizable single

guide RNA (sgRNA). The Cas9-sgRNA complex binds to DNA elements

complementary to the sgRNA and causes a steric block that halts transcript elongation by RNA polymerase, resulting in the repression of the target gene.

pLV-SFFV-dCas9-KRAB-PURO Lentiviral Vector expresses the dCas9-KRAB fusion

with SFFV promoter and allows for PURO selection of transduced cells.

Catalog Number DK202

Size 10  $\mu$ g at 0.5  $\mu$ g/ $\mu$ L in TE

**Shipping** Room temperature

Storage and Stability Store at -20°C immediately upon receipt. This product is stable for 6 months when

stored as directed.

**Quality Control** This plasmid is sequence verified.

Safety Precaution Remember that you will be working with samples containing infectious virus. Follow

the recommended NIH guidelines for all materials containing BSL-2 organisms. The

ALSTEM Lentiviral Expression System is designed to minimize the chance of

generating replication-competent lentivirus, but precautions should still be taken to

avoid direct contact with viral supernatants.

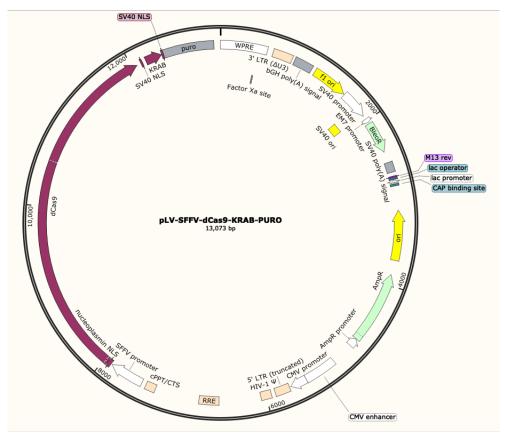
**Restricted Use** For Research Use Only. Not for use in diagnostic or therapeutic procedures.

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## **Vector Information**

This is a lentiviral expression vector that contains all the elements necessary for efficient and high yield viral production. A ubiquitous SFFV promoter drives the expression of the dCas9-KRAB fusion protein and PURO to allow for selection of transduced cells. This vector can be used for stable cell line generation or in combination with a gene specifc sgRNA to repress the target gene expression.



Note: Bacterial culture of pLenti vectors should be done in medium containing **10 μg/mL** Ampicillin. For maximal plasmid yield and quality, we recommend Stbl3 competent cells (Invitrogen).

## **IMPORTANT NOTICE**

Store the vial at -20°C immediately upon receipt.

