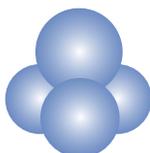


# Product Specification Sheet

<b>Product Name</b>	<b>pLV-EF1-dCas9-VPR-PGK-PURO Lentiviral Vector</b>
<b>Description</b>	<p>CRISPR (clustered regularly interspaced short palindromic repeats) activation (CRISPRa) is a widely used genetic technique that allows for targeted activation of transcription in bacteria and mammalian cells. The CRISPRa system is comprised of a catalytically inactive Cas9 (dCas9) protein fused with a transcriptional activator such as the tripartite fusion of three transcription activation domains: VP64, p65 and Rta (VPR) and a customizable single guide RNA (sgRNA). The Cas9-sgRNA complex binds to DNA elements complementary to the sgRNA and recruits transcription factors to increase gene expression, resulting in the activation of the target gene.</p> <p>pLV-EF1-dCas9-VPR-PGK-PURO Lentiviral Vector expresses the dCas9-VPR fusion with an EF1 promoter and PURO with a PGK promoter to allow for selection of transduced cells.</p>
<b>Catalog Number</b>	DV102
<b>Size</b>	10 µg at 0.5 µg/µL in TE
<b>Shipping</b>	Room temperature
<b>Storage and Stability</b>	Store at -20°C immediately upon receipt. This product is stable for 6 months when stored as directed.
<b>Quality Control</b>	This plasmid is sequence verified.
<b>Safety Precaution</b>	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.
<b>Restricted Use</b>	For Research Use Only. Not for use in diagnostic or therapeutic procedures.



## **ALSTEM, INC**

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Tel: (510) 708-0096

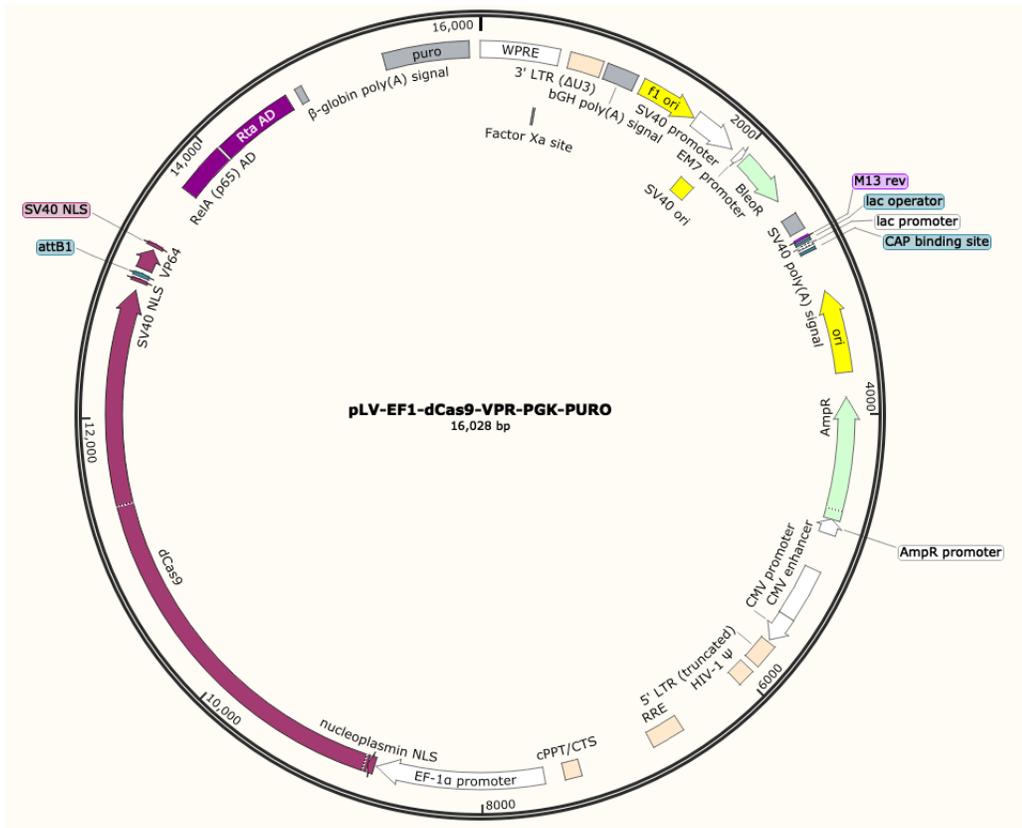
Fax: (866) 605-8766

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[info@alstembio.com](mailto:info@alstembio.com)

## Vector Information

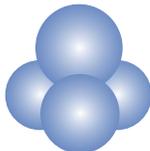
This is a lentiviral expression vector that contains all the elements necessary for efficient and high yield viral production. Ubiquitous EF1 and PGK promoters drive the expression of the dCas9-VPR fusion protein and PURO, respectively, to allow for the selection of transduced cells. This vector can be used for stable cell line generation or in combination with a gene specific sgRNA to activate the target gene expression.



*Note: Bacterial culture of pLenti vectors should be done in medium containing 50 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.



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