

# dCas9-VP64

Catalog Number LDG003POE

Package

20 μg / 100 μg / Customized package

For full product information, images and publications, please visit our website.



# Specifications

Species of Origin Streptococcus pyogenes	Expression System Escherichia coli
<b>Affinity Tag</b> His Tag (C-term)	<b>Storage Buffer</b> Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Purity >90% as determined by SDS-PAGE analysis.	Molecular weight The protein has a calculated MW of 169.29 kDa. The protein migrates as 130-180 kDa under reducing condition (SDS-PAGE analysis).
Endotoxin Level <0.1 EU per 1 $\mu$ g of the protein by the LAL method.	<b>Form</b> Lyophilized

## Background

### **Tainan Headquarter**

 $\bowtie$  bd@leadgene.com.tw

Innovation & Research Center

**CLD** Center

® +886-6-2536677

& +886-2-27065528

& +886-6-2536677



### Background

dCas9-VP64 refers to the dCas9 protein (#PDB: 5Y36\_A) fused with the VP64 transcription activation domain, which is used in CRISPRbased gene activation. Comprising a deactivated Cas9 (dCas9) protein and VP64 transcriptional activator, it precisely targets gene promoters, enhancing gene expression without altering the DNA sequence. dCas9-VP64 offers a versatile tool for studying gene function, disease mechanisms, and potential therapeutic interventions.

dCas9 protein is an endonuclease-inactive version of Cas9 (CRISPR associated protein 9). dCas9 lacks endonuclease activity so that it binds but does not cleave cognate DNA, which can be used to localize transcriptional activators or repressors to specific DNA sequences in order to control transcription.

#### Synonyms

CRISPR-associated endonuclease Cas9/Csn1, SpCas9, SpyCas9

#### Sequence Note

Met1-Asp1368

## Instruction

#### Reconstitution

It is recommended to reconstitute the lyophilized protein in sterile  $H_2O$  to a concentration not less than 200 µg/mL and incubate the stock solution for at least 20 min to ensure sufficient redissolved.

#### Shipping

The product is shipped with polar packs. Upon receipt, store it immediately at -20°C or lower for long term storage.

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#### **Stability & Storage**

This product is stable after storage at:

- -20°C for 12 months in lyophilized state from date of receipt.
- -20°C or -80°C for 1 month under sterile conditions after reconstitution.

Avoid repeated freeze/thaw cycles.

## Image

kDa	Μ
180 140	
100	
75	
60	
45	
35	DLEADGENE OLEAD
25	-

SDS-PAGE analysis of recombinant dCas9-VP64.

Disclaimer : For Research Use or Further Manufacturing Only.

#### **Tainan Headquarter**

Innovation & Research Center

CLD Center

& +886-6-253<u>6677</u>

® +886-2-27065528

& +8<u>86-6-2536677</u>

☑ bd@leadgene.com.tw