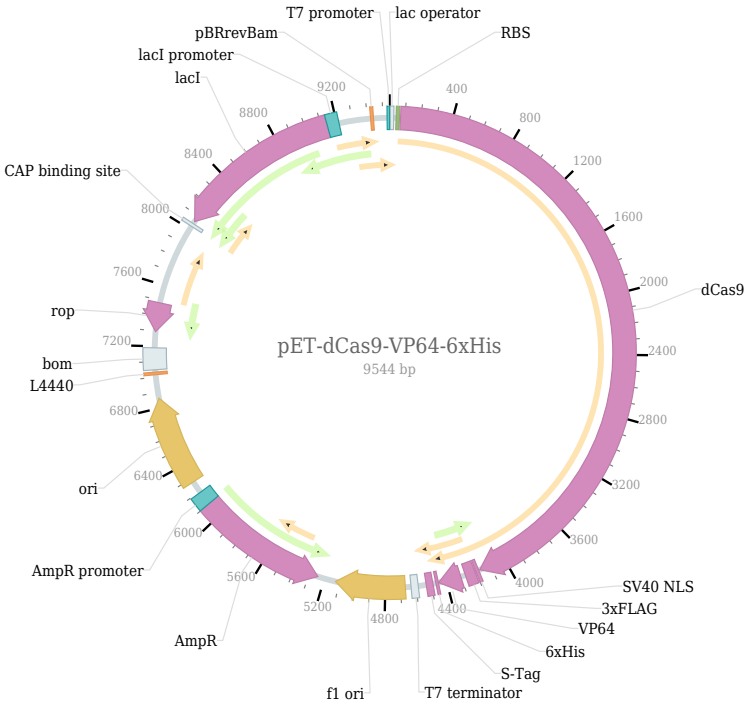
pET-dCas9-VP64-6xHis

Vector ID	V001717
Antibiotic Resistance	Ampicillin
Length	9544 bp
Vector Type	Bacterial Expression

Product Information

Replication Origin	ori
Copy Number	High Copy
Promoter	T7
Cloning Method	Gibson Cloning
5' Primer	T7 promoter
3' Primer	T7 terminator
Growth Strain(s)	Stbl3
Comment	pET-dCas9-VP64-6xHis is a T7-inducible pET29 bacterial expression plasmid developed by David Liu's lab to produce catalytically dead dCas9 fused to VP64 transactivation domain and a C-terminal 6×His tag for Ni-affinity purification. Expressed dCas9-VP64 protein forms ribonucleoprotein complexes with sgRNAs to trigger targeted endogenous gene activation via CRISPRa without genomic cleavage. When combined with cationic lipids, this protein can be delivered directly into mammalian cells for rapid, transient transcriptional upregulation with lower off-target risks than DNA transfection. It serves as a core reagent for virus-free in vitro CRISPR activation and compatible with the lab's (-30)GFP lipid-mediated protein delivery platform.

Vector Map



Plasmid Resuspension Protocol

1. Centrifuge at 5,000×g for 5 min.
2. Carefully open the tube and add sterile water to dissolve the DNA: add 20 µl for 5 µg plasmid, and 100 µl for 100 µg plasmid.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin to concentrate the liquid at the bottom. Speed is less than 5000×g.
5. Store the plasmid at -20 ℃.