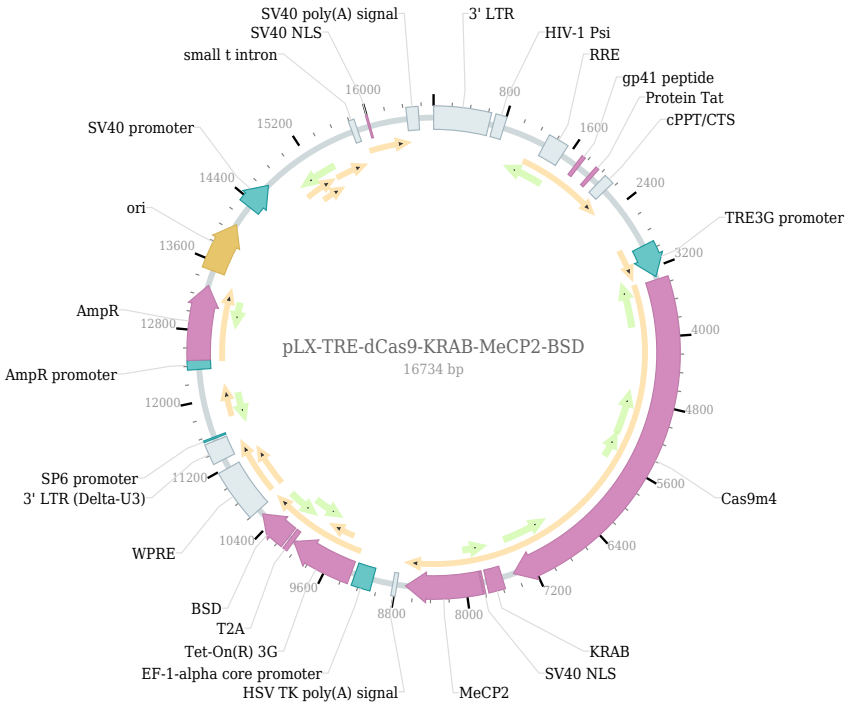
pLX-TRE-dCas9-KRAB-MeCP2-BSD

Vector ID	V017360
Antibiotic Resistance	Ampicillin
Length	16734 bp
Vector Type	Genome editing
Host	Mammalian cells, Lentivirus

Product Information

Replication Origin	ori
Source/Author	Andrea Califano
Selection Marker	Blast
Copy Number	High copy number
Promoter	TRE3G
Growth Strain(s)	Stbl3
Growth Temperature	30℃
Comment	pLX-TRE-dCas9-KRAB-MeCP2-BSD is a lentiviral plasmid designed for inducible gene knockdown in human cells. It features a tetracycline-responsive TRE3G promoter controlling the expression of a fusion protein, which combines a nuclease-deficient dCas9 with two repressor domains (KRAB and MeCP2) for potent transcriptional silencing. The plasmid includes a blasticidin resistance gene (BSD) for selection in mammalian cells and an ampicillin resistance gene for bacterial propagation. Its primary application is in CRISPR interference (CRISPRi) experiments, particularly for pooled single-cell RNA sequencing studies.

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 ℃.