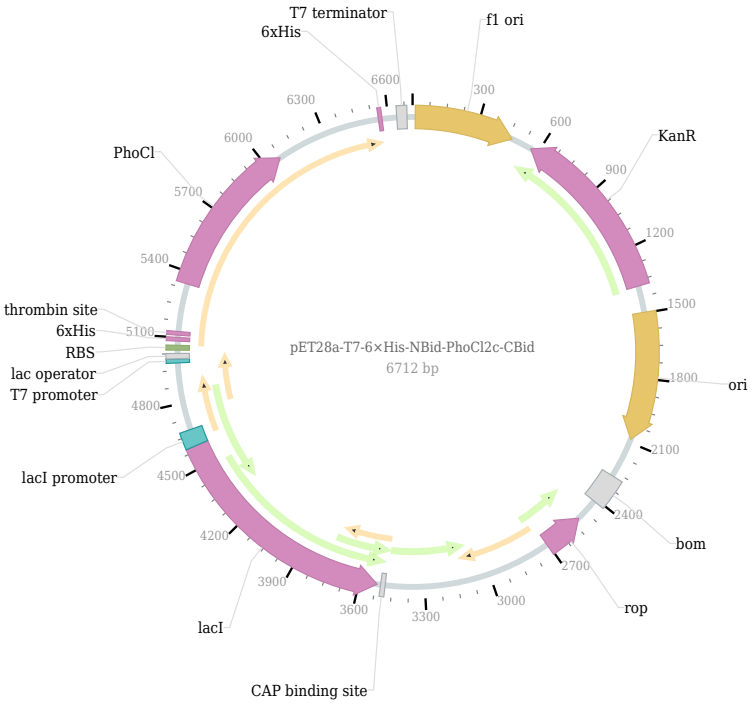
pET28a-T7-6×His-NBid-PhoCl2c-CBid

Vector ID	V013882
Antibiotic Resistance	Kanamycin
Length	6712 bp
Vector Type	Protein expression
Host	E. coli

Product Information

Replication Origin	ori
Promoter	T7
Growth Strain(s)	DH5a
Growth Temperature	37℃
Comment	pET28a-T7-6×His-NBid-PhoCl2c-Cbid is a pET28a-derived E. coli expression vector producing an N-terminal 6×His-tagged photoactivatable Bid under T7 control, with kanamycin selection in BL21(DE3) hosts. The violet-light photocleavable protein PhoCl2c is inserted at the caspase-8 cleavage site (LQTDG), separating autoinhibitory NBid from pro-apoptotic CBid. Illumination cleaves PhoCl2c and releases CBid, which translocates to mitochondria and triggers apoptosis, enabling optogenetic control of cell death. The tag permits affinity purification of the fusion for in vitro characterization.

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 ℃.