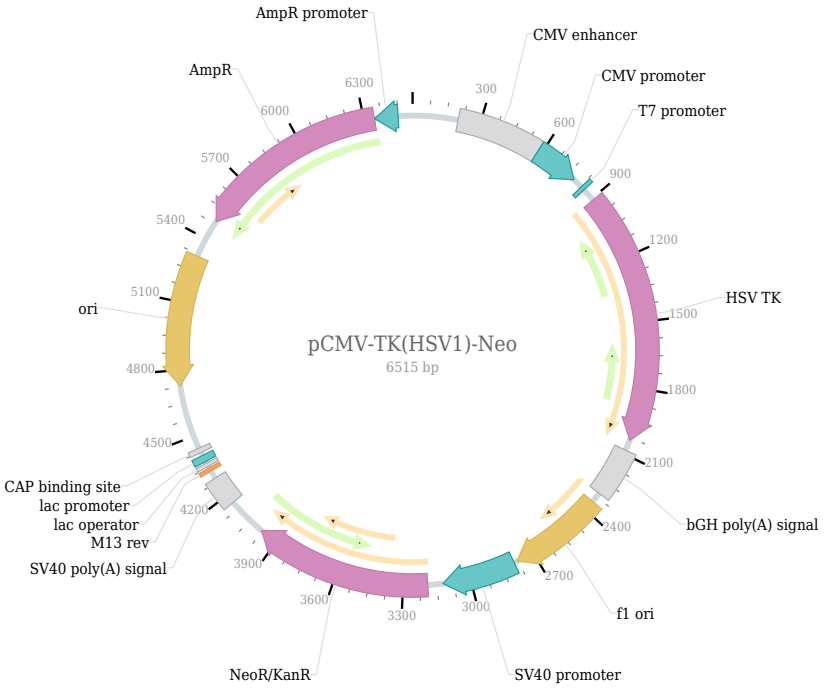
pCMV-TK(HSV1)-Neo

Vector ID	V017672
Antibiotic Resistance	Ampicillin
Length	6515 bp
Vector Type	Protein expression
Host	Mammalian cells

Product Information

Replication Origin	ori
Selection Marker	Neo/G418
Promoter	CMV
5' Primer	CMV-F
Growth Strain(s)	DH10B
Growth Temperature	37℃
Comment	pCMV-TK(HSV1)-Neo is a mammalian expression vector with CMV promoter driving HSV1 thymidine kinase gene, Neo/G418 resistance, for ganciclovir-based cell ablation and suicide gene therapy studies. HSV1-TK (herpes simplex virus type 1 thymidine kinase) serves as a conditional negative-selection suicide marker. Upon ganciclovir (GCV) treatment, HSV1-TK phosphorylates the prodrug GCV into toxic nucleotide analogs that terminate DNA elongation and kill proliferating cells. In targeting vectors, HSV1-TK is placed outside homology arms to eliminate random-integrant clones during positive-negative selection; it can also act as an in-vivo safety switch to ablate engineered cells after GCV administration.

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 ℃.