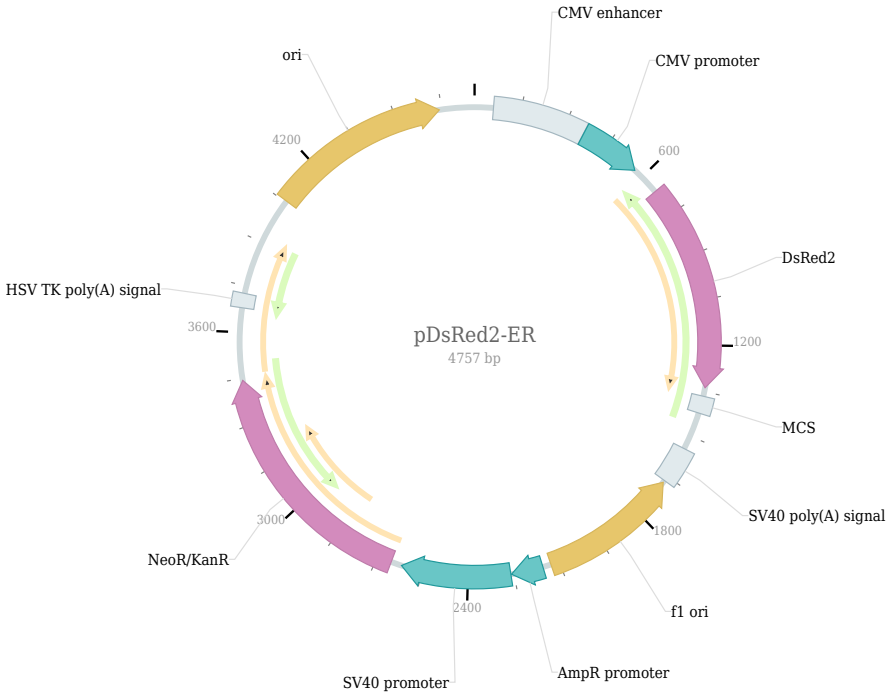
pDsRed2-ER

Vector ID	V006518
Antibiotic Resistance	Kanamycin
Length	4757 bp
Vector Type	Fluorescent Protein Reporter Vectors

Product Information

Replication Origin	ori
Selection Marker	Neomycin
Promoter	CMV
Cloning Method	Enzyme digestion and ligation
Comment	pDsRed2-ER is a mammalian expression vector that encodes a fusion consisting of Discosoma sp. red fluorescent protein (DsRed2); the endoplasmic reticulum (ER) targeting sequence of calreticulin, fused to the 5' end of DsRed2; and the ER retention sequence, KDEL, fused to the 3' end of DsRed2a human codon-optimized DsRed variant engineered for faster maturation and lower non-specific aggregation.To drive expression of DsRed2, this vector contains the immediate early promoter of cytomegalovirus (PCMV IE). SV40 polyadenylation signals downstream of the DsRed2 gene direct proper processing of the 3'-end of the DsRed2 mRNA transcript. The vector also contains an SV40 origin for replication in any mammalian cell line that expresses the SV40 T-antigen, a pUC origin of replication for propagation in E. coli, and an f1 origin for single-stranded DNA production. A neomycin resistance cassetteconsisting of the SV40 early promoter (PSV40e), the neomycin/kanamycin resistance gene of Tn5 (Neor/Kanr), and polyadenylation signals from the herpes simplex virus thymidine kinase (HSV TK poly A) geneallows stably transfected eukaryotic cells to be selected using G418. A bacterial promoter (P) upstream of this cassette drives expression of the gene encoding kanamycin resistance in E. coli.

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 ℃.