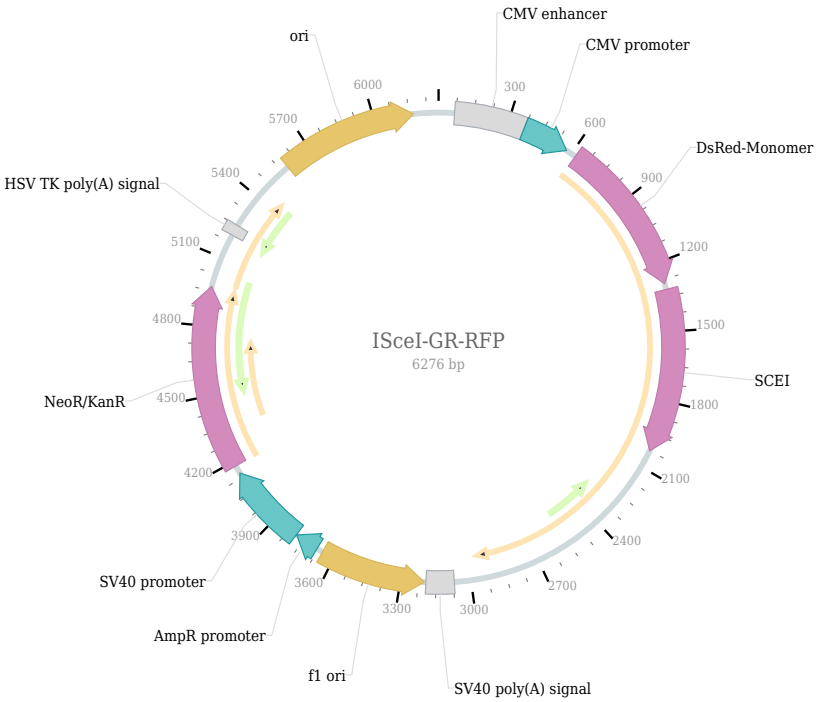
ISceI-GR-RFP

Vector ID	V007273
Antibiotic Resistance	Kanamycin
Length	6276 bp
Vector Type	Mammalian Expression Vectors

Product Information

Replication Origin	ori
Source/Author	Tom Misteli Lab
Selection Marker	DsRed-Monomer
Copy Number	High copy number
Promoter	CMV
Growth Strain(s)	DH5alpha
Growth Temperature	37℃
Comment	The plasmid vector ISceI-GR-RFP is a tool designed for inducible, controlled genetic modification. It combines three key elements: the I-SceI meganuclease for creating precise DNA double-strand breaks, a glucocorticoid receptor (GR) ligand-binding domain that keeps the nuclease inactive and sequestered in the cytoplasm until induction, and an RFP (Red Fluorescent Protein) marker for visualizing successfully transfected cells. Upon adding a chemical inducer like dexamethasone, the I-SceI-GR fusion protein translocates to the nucleus to cleave DNA at specific 18-bp recognition sequences, enabling controlled study of DNA repair mechanisms.

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 ℃.