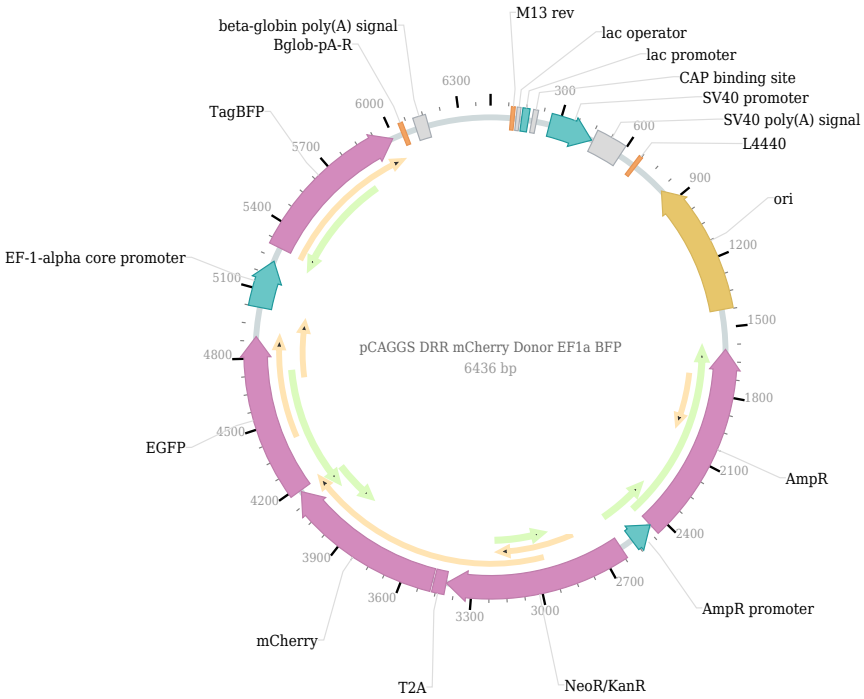
pCAGGS DRR mCherry Donor EF1a BFP

载体编号 Vector ID	V012510
抗性 Antibiotic Resistance	Ampicillin
长度 Length	6436 bp
载体类型 Vector Type	Mammalian Expression, Synthetic Biology

产品信息

复制子 Replication Origin	ori
筛选标记 Selection Marker	BFP
拷贝数 Copy Number	High Copy
培养菌株 Growth Strain(s)	DH10B
备注 Comment	This pCAGGS-based donor plasmid serves as homologous recombination template for the DRR DNA double-strand break reporter assay. Its core cassette consists of two homology arms flanking a T2A-mCherry expression fragment: the 5′ arm matches the 3′ end of NeoR-T2A from integrated pDRR, and the 3′ arm aligns with the 5′ region of EGFP in pDRR. Upon I-SceI-induced cleavage of genomic pDRR, homologous recombination swaps the stop/I-SceI segment in pDRR with mCherry from this plasmid, yielding mCherry-positive cells. An independent EF1α-BFP expression unit on the plasmid backbone acts as transfection control without participating in homologous pairing. Unlike integrated lentiviral pDRR, this donor is delivered via transient transfection and exists as episomal DNA in nuclei. Flow cytometry gates BFP-positive cells to quantify HR (mCherry+) versus cNHEJ (GFP+) repair efficiencies simultaneously.

质粒图谱



复溶方法

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 ℃.