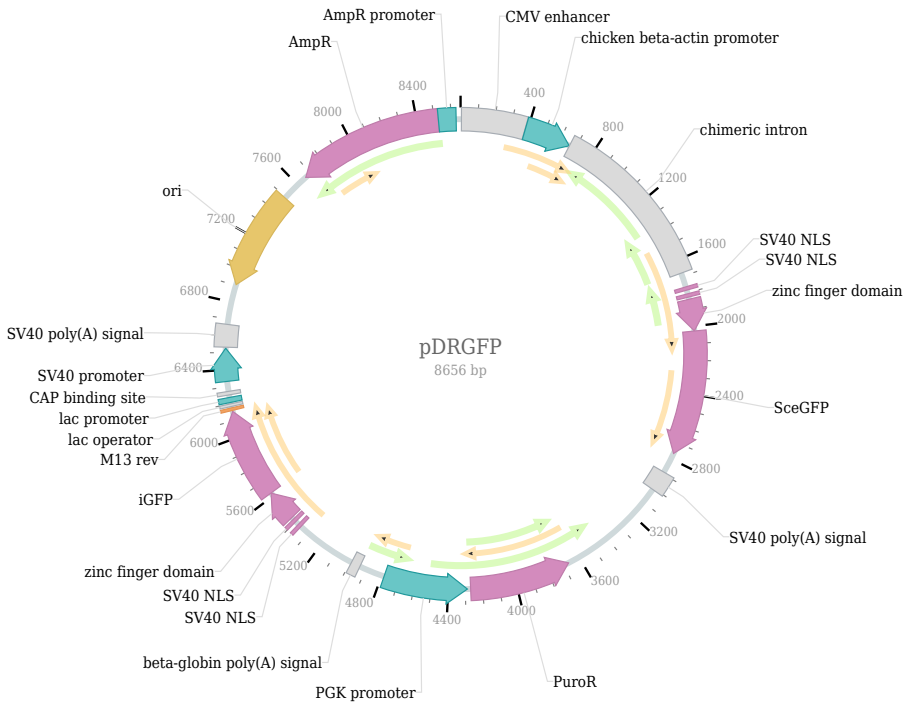
pDRGFP

载体编号 Vector ID	V001285
抗性 Antibiotic Resistance	Ampicillin
长度 Length	8656 bp
载体类型 Vector Type	Mammalian Expression

产品信息

筛选标记 Selection Marker	Puromycin
拷贝数 Copy Number	High Copy
克隆方法 Cloning Method	Restriction Enzyme
5' 引物 5' Primer	None
培养菌株 Growth Strain(s)	DH10B
培养温度 Growth Temperature	37℃
备注 Comment	pDR-GFP is a chromosome-integrated, GFP-based reporter vector designed to monitor homology-directed repair (HDR/GC, gene conversion) of chromosomal double-strand breaks (DSBs) in mammalian cells. Its structure contains two tandem, incomplete GFP sequences: a 5'-truncated "iGFP" (inactive GFP) and a 3'-truncated "SceGFP" with an I-SceI endonuclease recognition site inserted. When I-SceI induces a DSB at the I-SceI site within SceGFP, HDR/GC uses the homologous iGFP sequence as a template to restore a functional GFP gene, resulting in GFP fluorescence detectable by flow cytometry (FACS). This reporter is widely used in studies on HDR/GC regulation—for example, to assess the impact of factors like RAD51 or CtIP on HDR/GC efficiency, and to compare HDR/GC with other DSB repair pathways (e.g., alt-NHEJ, SSA) in cell lines such as mouse ES cells and HEK293 cells.

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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 ℃.