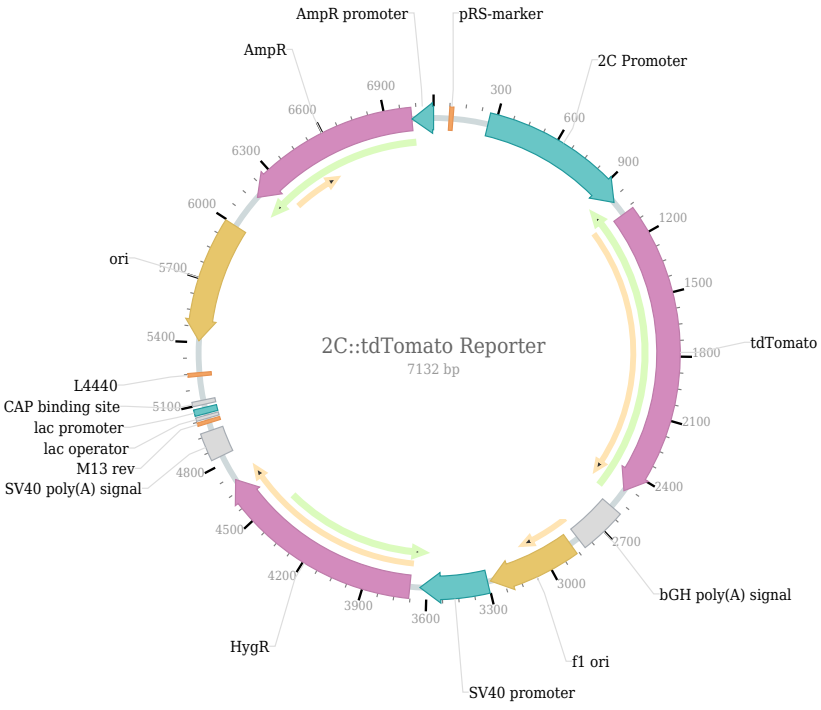
2C::tdTomato Reporter

载体编号 Vector ID	V006922
抗性 Antibiotic Resistance	Ampicillin
长度 Length	7132 bp
载体类型 Vector Type	Mammalian Expression

产品信息

复制子 Replication Origin	ori
筛选标记 Selection Marker	Hygromycin
拷贝数 Copy Number	High Copy
克隆方法 Cloning Method	Restriction Enzyme
5' 引物 5' Primer	Amp-R
3' 引物 3' Primer	BGH-rev
备注 Comment	The 2C::tdTomato reporter is a fluorescent plasmid construct that supports live-cell imaging, FACS sorting and transcriptomic profiling for quantification and isolation of reversible 2C-like subpopulations within stem cell cultures. The termed “2-cell promoter” is not a native mouse cellular promoter; instead, it corresponds to the 5’ long terminal repeat (LTR, MT2_Mm) derived from murine endogenous retrovirus MERVL. This retroviral cis-regulatory element has been evolutionarily integrated into the mouse genome, where it undergoes transient activation during zygotic genome activation (ZGA) at the two-cell stage and functions as an alternative promoter to drive hundreds of totipotency-associated 2C-specific genes. Within the 2C::tdTomato plasmid, this cloned MERVL LTR fragment serves as a cell-state biosensor: tdTomato red fluorescence is only triggered upon activation of the endogenous MERVL-governed two-cell transcriptional program.

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 ℃.