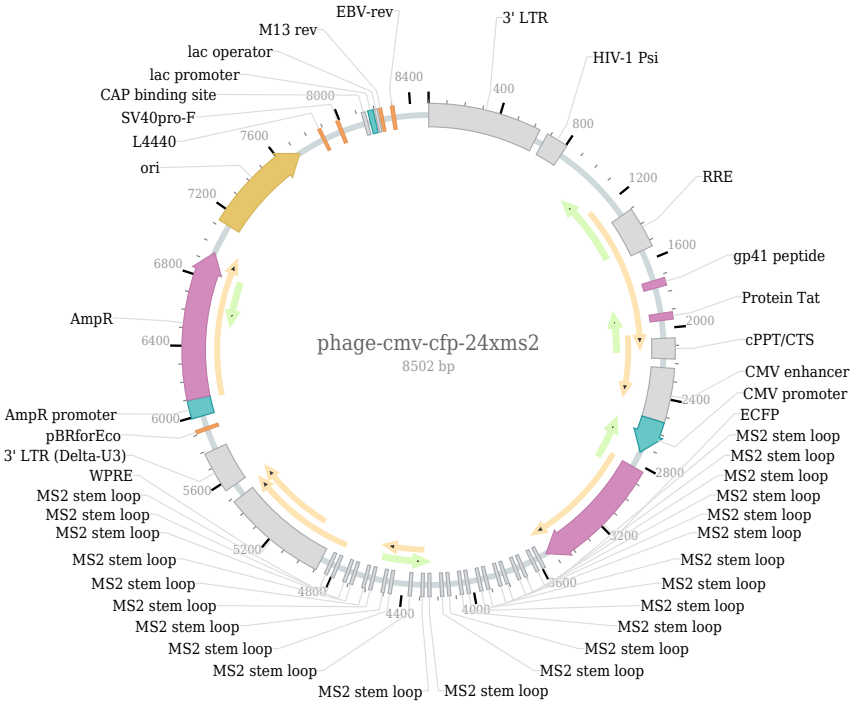
phage-cmv-cfp-24xms2

载体编号 Vector ID	V000457
抗性 Antibiotic Resistance	Ampicillin
长度 Length	8502 bp
载体类型 Vector Type	Mammalian Expression, Lentiviral

产品信息

复制子 Replication Origin	ori
启动子 Promoter	CMV
克隆方法 Cloning Method	Restriction Enzyme
5' 引物 5' Primer	CMV-F
3' 引物 3' Primer	WPRE-R (5'-CATAGCGTAAAAGGAGCAACA-3')
培养菌株 Growth Strain(s)	Stbl3
培养温度 Growth Temperature	30℃
备注 Comment	Note it is possible that the 24x MS2 repeats may recombine even in Stbl3 cells. If this occurs, try growing the plasmid at 30C instead. The MS2 system is a widely used method for labeling mRNA. Here's how it works: A genetically encoded sequence derived from the bacteriophage MS2 is inserted into the gene of interest. This sequence folds into a unique stem-loop structure known as the MS2-binding site (MBS). For example, in the case of imaging endogenous β-actin mRNA, 24xMS2 binding sites were inserted into the 3' untranslated region (UTR) of the β-actin gene. Cells are made to express the MS2 coat protein (MCP) fused to a fluorescent protein (MCP-FP). When the cells express both the gene carrying the MBS and the MCP-FP, the MCP-FP binds specifically to the MBS on the mRNA. Since MCP binds to its target RNA stem loop as a dimer, the dimerized MCP-FP can recognize and attach to the MBS. Once the MCP-FP binds to the MBS on the mRNA, the mRNA becomes fluorescently labeled. This allows researchers to visualize the mRNA under a fluorescence microscope. Because both the MCP-FP and the reporter mRNA with MBS are genetically encoded, stable cell lines or even transgenic animals can be created for long-term and in-depth studies of mRNA dynamics, such as transcription, transport, and localization in various cell types and organisms.

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 ℃.