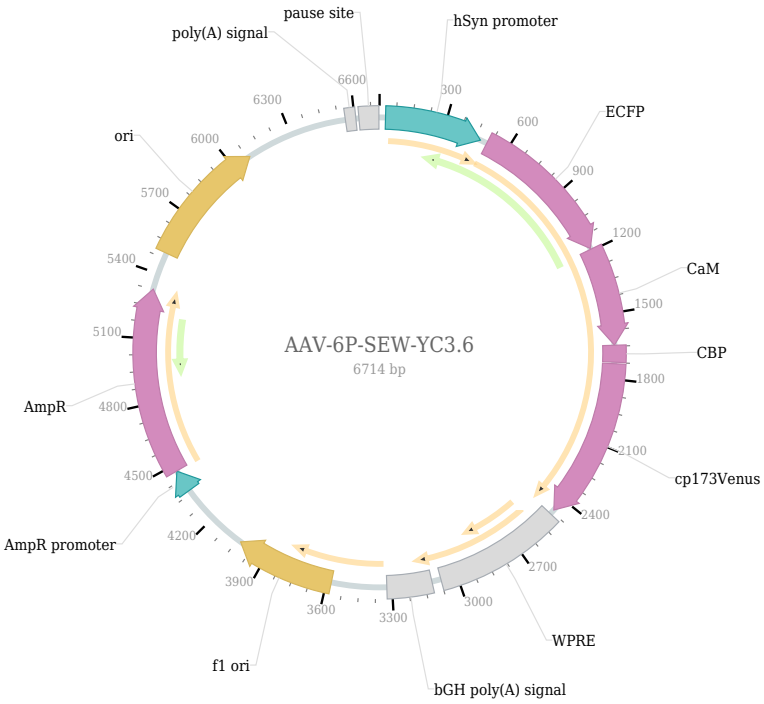
AAV-6P-SEW-YC3.6

载体编号 Vector ID	V017057
抗性 Antibiotic Resistance	Ampicillin
长度 Length	6714 bp
载体类型 Vector Type	Protein expression
宿主 Host	Mammalian cells, Adeno-associated virus

产品信息

复制子 Replication Origin	ori
拷贝数 Copy Number	Low copy number
启动子 Promoter	SYN1
培养菌株 Growth Strain(s)	Stbl3
培养温度 Growth Temperature	37℃
备注 Comment	AAV-6P-SEW-YC3.6 is a neuron-specific adeno-associated viral vector that encodes YC3.60, a ratiometric genetically encoded calcium indicator (GECI) based on FRET. Controlled by the synapsin promoter, this vector sustains stable YC3.60 expression in mouse cortical neurons for months following a single intracortical injection. YC3.60 consists of a tandem fusion chain: eCFP (FRET donor), calmodulin (CaM), M13 peptide, and Venus (FRET acceptor). When neurons fire and calcium ions flow into the cell, Ca^{2+} binds to CaM, triggering a conformational shift that allows CaM to bind tightly to the M13 peptide. This folding compresses the whole protein, shortening the distance between eCFP and Venus and boosting FRET efficiency. The resulting ΔR/R ratiometric signals greatly suppress artifacts caused by brain movement and uneven illumination, outperforming single-wavelength calcium sensors. This viral tool supports chronic wide-field optical imaging, enabling repeated high-fidelity recording of sensory-evoked cortical activity maps over multiple weeks.

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 ℃.