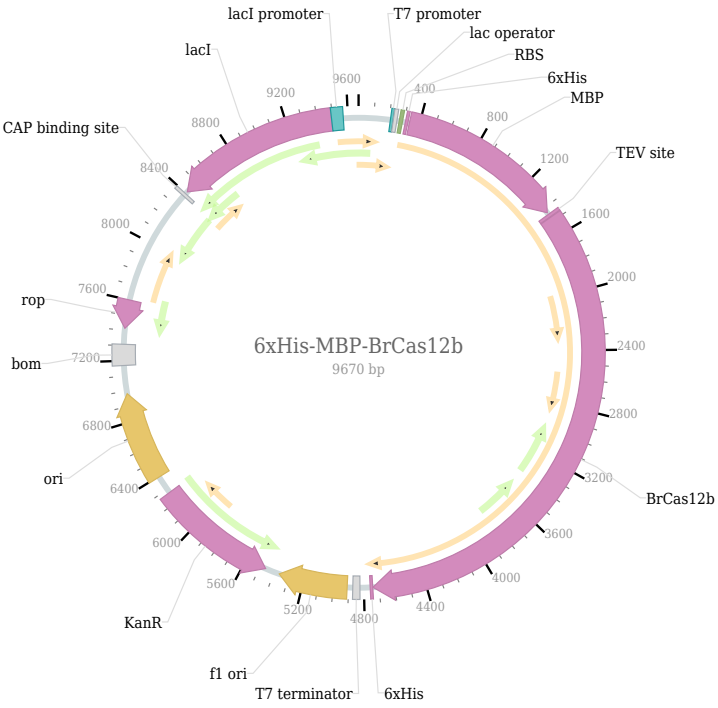
6xHis-MBP-BrCas12b

载体编号 Vector ID	V017278
抗性 Antibiotic Resistance	Kanamycin
长度 Length	9670 bp
载体类型 Vector Type	Gene expression
宿主 Host	E. coli

产品信息

复制子 Replication Origin	ori
培养菌株 Growth Strain(s)	DH10B
培养温度 Growth Temperature	37℃
备注 Comment	The 6xHis-MBP-BrCas12b plasmid expresses tagged, thermostable BrCas12b from Brevibacillus sp. SYP-B805 in bacteria. The purified nuclease powers one-pot RT-LAMP-CRISPR assays for rapid, point-of-care SARS-CoV-2 VOC detection. BrCas12b is a thermostable CRISPR-Cas12b effector endonuclease isolated from Brevibacillus sp. SYP-B805 (GenBank ID: WP_165214399.1). It binds crRNA/tracrRNA duplexes to recognize double-stranded DNA targets with TTN PAM sequences, exerting both target-specific cis-cleavage and non-specific trans-cleavage activity. Compared with previously used AacCas12b and AapCas12b, BrCas12b has superior thermal tolerance: its melting temperature reaches 63.4 °C, retaining robust cleavage activity up to 70 °C without extra additives like taurine, and maintains strong trans-cleavage performance at 60–64 °C, the optimal temperature range for RT-LAMP amplification. It works stably in standard LAMP buffer with minimal inhibition to isothermal amplification.

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 ℃.