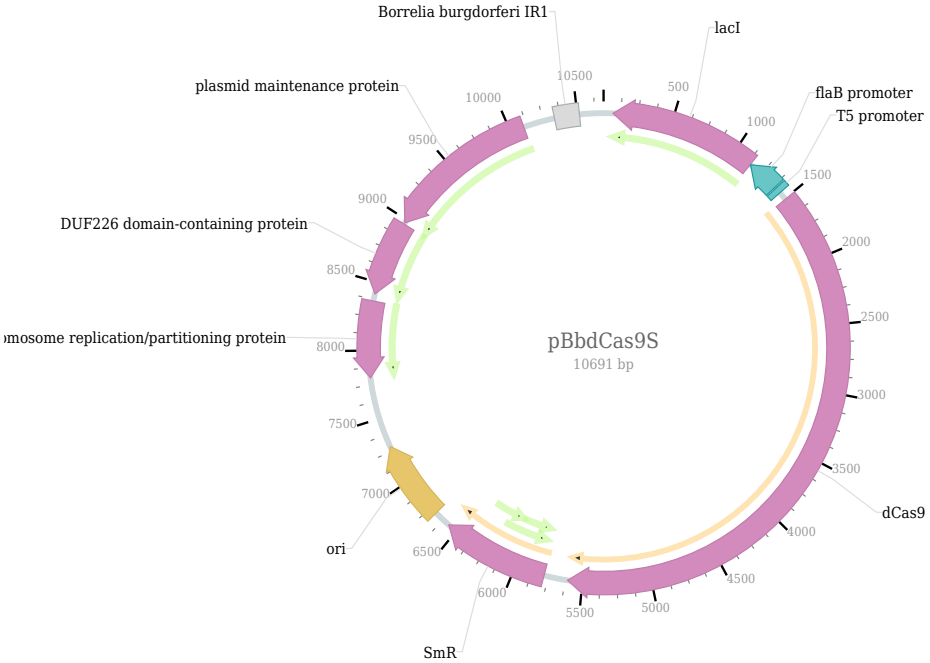
pBbdCas9S

Vector ID	V017033
Antibiotic Resistance	Streptomycin
Length	10691 bp
Vector Type	Gene knockout
Host	E. coli

Product Information

Replication Origin	ori
Promoter	T5
Growth Strain(s)	stbl3
Growth Temperature	37℃
Comment	pBbdCas9S is an all-in-one IPTG-inducible CRISPRi shuttle vector designed for Borrelia burgdorferi, carrying streptomycin/spectinomycin resistance and a dcas9-lacI expression cassette under PQE30 promoter. It enables one-step transformation to silence target genes by inserting customized sgRNA fragments, achieving over 95% transcriptional repression upon 0.1 mM IPTG induction. Mutated variants like pBbdCas9S(RBSmut) and pBbdCas9S(-10TC) are derived to reduce leaky dCas9 expression without inducer. This plasmid works in both E. coli and infectious B. burgdorferi strains for essential gene functional analysis.

Vector Map



Plasmid Resuspension Protocol

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 ℃.