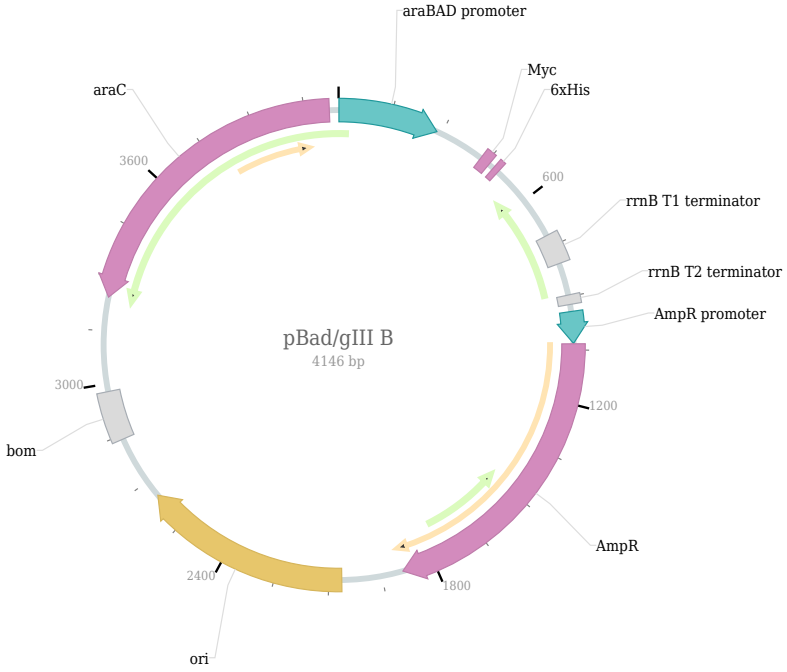
pBad/gIII B

Vector ID	V006947
Antibiotic Resistance	Ampicillin
Length	4146 bp
Vector Type	E. coli Expression Vectors

Product Information

Replication Origin	ori
Copy Number	High copy number
Promoter	araBAD
Cloning Method	Enzyme digestion and ligation
5' Primer	pBAD-F: ATGCCATAGCATTTTTATCC
3' Primer	pBAD-R: gatttaatctgtatcagg
Fusion Tag	N-GIII signal, C-His, C-Myc
Growth Strain(s)	Top10
Growth Temperature	37℃
Comment	Yersinia pestis, the causative agent of plague, employs multiple virulence mechanisms for infection. Its type III secretion system (T3SS) injects Yop proteins (e.g., YopH, YopE) into host cells to inhibit phagocytosis and immune responses. Key surface antigens like F1 capsule and V antigen (LcrV) provide antiphagocytic protection. The plasminogen activator (Pla) on plasmid pPCP1 enhances bacterial dissemination by degrading blood clots and promoting systemic invasion. Additionally, YscP/YscU proteins regulate T3SS substrate specificity, ensuring efficient secretion of virulence factors like the inner rod protein YscI. Rapid diagnosis targets these antigens or genetic markers (e.g., pla) for early intervention.

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 ℃.