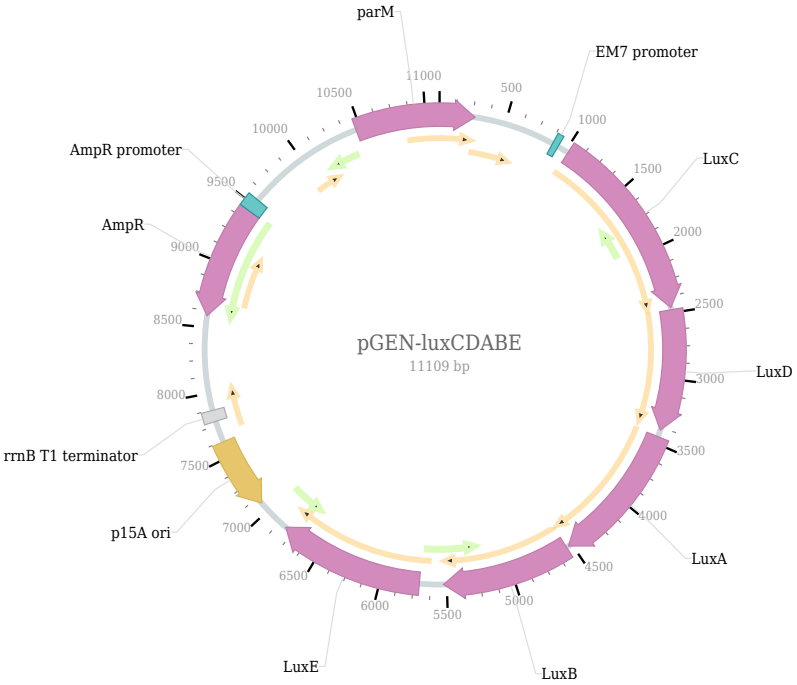
pGEN-luxCDABE

Vector ID	V000912
Antibiotic Resistance	Ampicillin
Length	11109 bp
Vector Type	Luciferase

Product Information

Replication Origin	p15A ori
Copy Number	Low Copy
Promoter	EM7
Cloning Method	Restriction Enzyme
5' Primer	CATATGAAGCTTGGTACCGGGATC
3' Primer	CTTTCGGGAAAGATTTCAACCTGG
Growth Strain(s)	DH10B
Growth Temperature	37℃
Comment	pGEN-luxCDABE is a low-copy bioluminescent reporter plasmid built on the pGEN222 backbone. It carries the luxCDABE luciferase operon controlled by synthetic constitutive EM7 promoter, named P_em7-lux. Its hok-sok and par loci ensure stable plasmid retention in UPEC both in vitro and inside infected mice. Researchers can swap EM7 with target promoters like fliC to make gene-specific luminescence reporters for real-time infection imaging. This vector was used in the study to track UPEC spread and fliC expression during ascending urinary tract infections.

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 ℃.