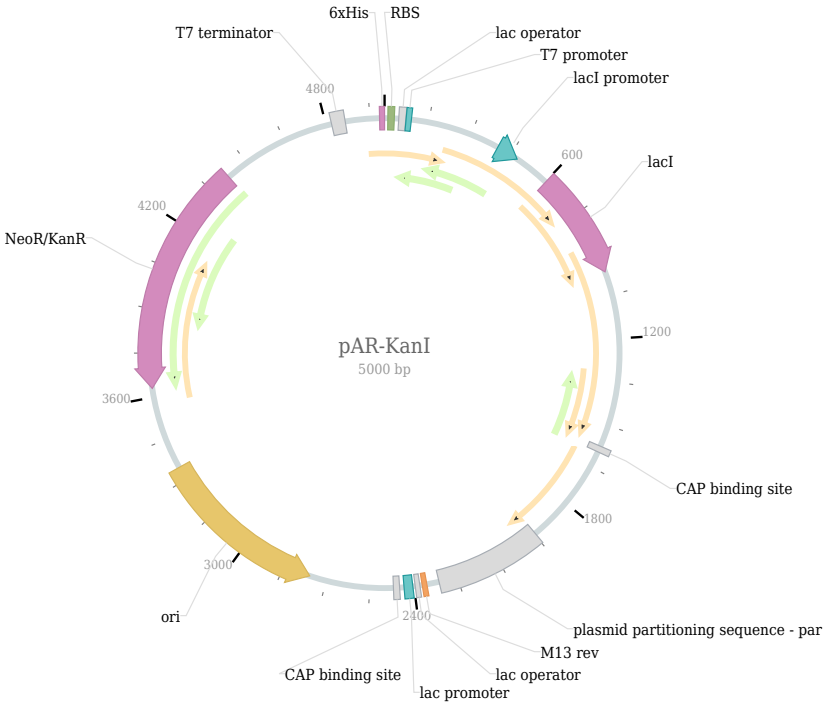
pAR-KanI

Vector ID	V009453
Antibiotic Resistance	Kanamycin
Length	5000 bp
Vector Type	Expression vector

Product Information

Replication Origin	ori
Source/Author	Eguia FAP., Ramos HR, Kraschowetz S, Omote DQ, Ramos CRR., Ho PL, Carvalho E, Goncalves VM.
Growth Strain(s)	Top10
Growth Temperature	37℃
Comment	pAR-KanI is a novel high-copy E. coli expression vector modified from pAE, integrated with the pSC101 par partition locus and a kanamycin resistance marker instead of ampicillin. The par locus acts as a prokaryotic centromere to evenly segregate plasmids into daughter cells during cell division and drastically improve plasmid stability without antibiotic selection. It carries a T7 expression system plus lac regulatory elements to tightly control heterologous protein synthesis without obvious leaky expression. This plasmid maintains over 92%–100% retention in complex media (2YT, phytone-based auto-induction medium) even without antibiotics during overexpression. It successfully yields rhG-CSF and vaccine candidate rSm14 at high titers, making it cost-effective for industrial biopharmaceutical production.

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 ℃.