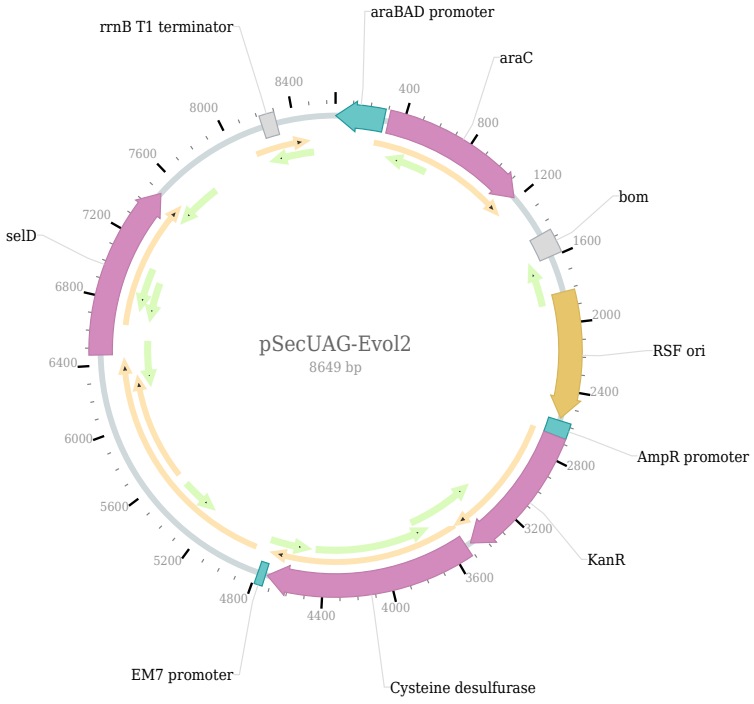
pSecUAG-Evol2

Vector ID	V017305
Antibiotic Resistance	Kanamycin
Length	8649 bp
Vector Type	Protein expression
Host	E. coli

Product Information

Replication Origin	RSF ori
Source/Author	Dieter Söll
Copy Number	Low
Promoter	araBAD
Growth Strain(s)	DH10B
Growth Temperature	37℃
Comment	pSecUAG-Evol2 is a bacterial expression plasmid engineered for the specific incorporation of selenocysteine at UAG codons. Based on a modified pBAD-myc-HisA backbone, it features an RSF origin and a kanamycin resistance marker for high-copy replication in E. coli. The vector co-expresses five key elements: an engineered allo-tRNA, a thioredoxin variant with a UAG codon specifying selenocysteine, selenocysteine synthase (SelA), selenophosphate synthase (SelD), and a cysteine desulfurase (SufS). This system provides the necessary machinery for producing recombinant proteins containing the 21st amino acid, selenocysteine.

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 ℃.