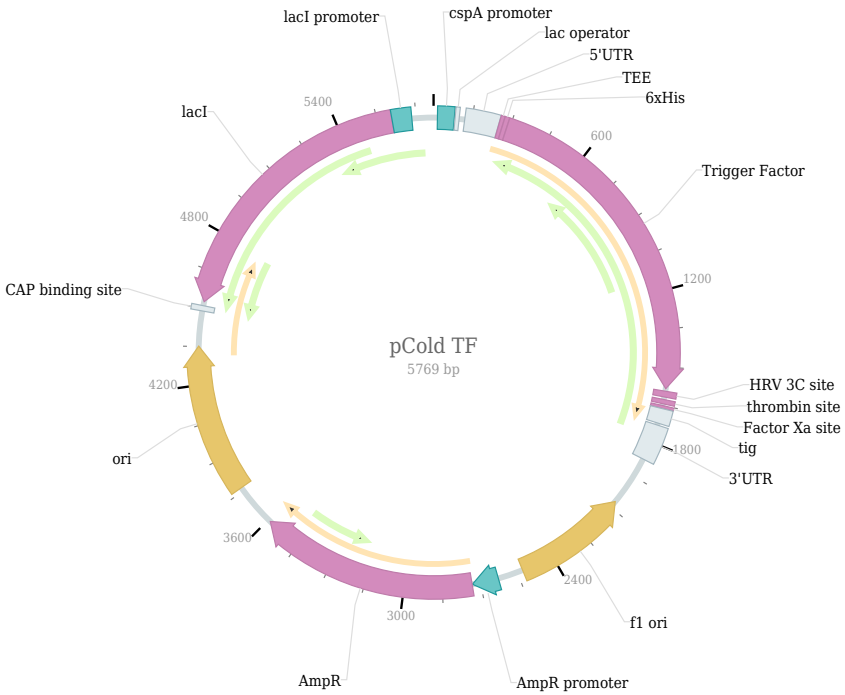
pCold TF

Vector ID	V008303
Antibiotic Resistance	Ampicillin
Length	5769 bp
Vector Type	Expression vector

Product Information

Replication Origin	ori
Source/Author	Shodai T, Takakura H.
Growth Temperature	37℃
Comment	pCold TF is a cold shock protein expression vector. It utilizes the cspA promoter for induction at low temperatures and fuses the target protein to a Trigger Factor (TF) chaperone to enhance solubility and correct folding in E. coli. It includes tags for purification and protease sites for tag removal.This vector inserts a 5' non-coding region (5'UTR), TEE (Translation Enhancement Element) sequence, His-Tag sequence, TF sequence, and Multiple Cloning Site (MCS) downstream of the cspA promoter. A lac operator was also inserted downstream of the cspA promoter to tightly regulate protein expression. And cut-off sites for HRV 3C Protease, Thrombin and Factor Xa are inserted between the TF sequence and MCS, which are used to eliminate tags of fusion proteins. pCold TF DNA applies the promoter of E. coli, and like the other pCold DNAs, most of E. coli can be used as an expression host. Using pCold TF DNA, soluble expression of difficult-to-express genes can be achieved through the soluble tagging function of TF and the molecular chaperone effect.

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 ℃.