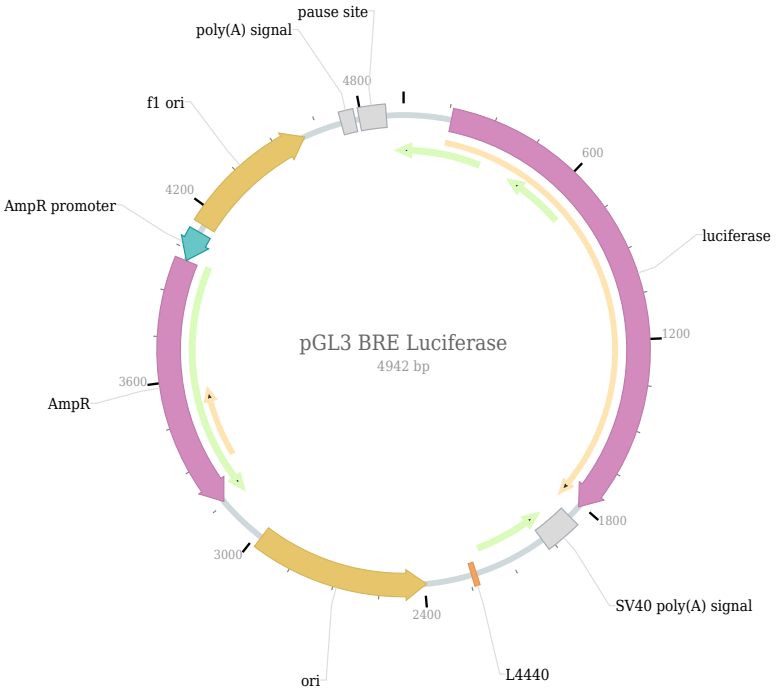
pGL3 BRE Luciferase

Vector ID	V001746
Antibiotic Resistance	Ampicillin
Length	4942 bp
Vector Type	Mammalian Expression, Luciferase ; BMP/Smad Transc

Product Information

Replication Origin	ori
Copy Number	High Copy
Cloning Method	Restriction Enzyme
5' Primer	RVprimer3
3' Primer	LucNRev
Growth Strain(s)	DH10B
Growth Temperature	37℃
Comment	The pGL3 BRE Luciferase vector is an important tool for studying the BMP signaling pathway. It is used in BMP signaling pathway research to detect the regulatory effect of BMP on gene transcription. When transfected into cells like C2C12 and stimulated by BMP, its luciferase activity reflects the pathway's activation, being unaffected by TGF - β or activin, thus distinguishing the BMP pathway's role. It is also used in gene transcription regulation research, helping understand how BMP regulates genes like Id1. By mutating vector elements and detecting luciferase activity, the role of each element in BMP - induced transcription activation can be determined. The vector has high specificity for BMP signals, as its specific sequence elements allow activation only in BMP's presence and not by other factors like TGF - β, activin, or serum, enabling accurate study of the BMP pathway's role. It also has good sensitivity, as luciferase activity shows a strict dose - dependent change when cells are stimulated by different BMP concentrations, allowing precise study of the pathway's activity change.

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 ℃.