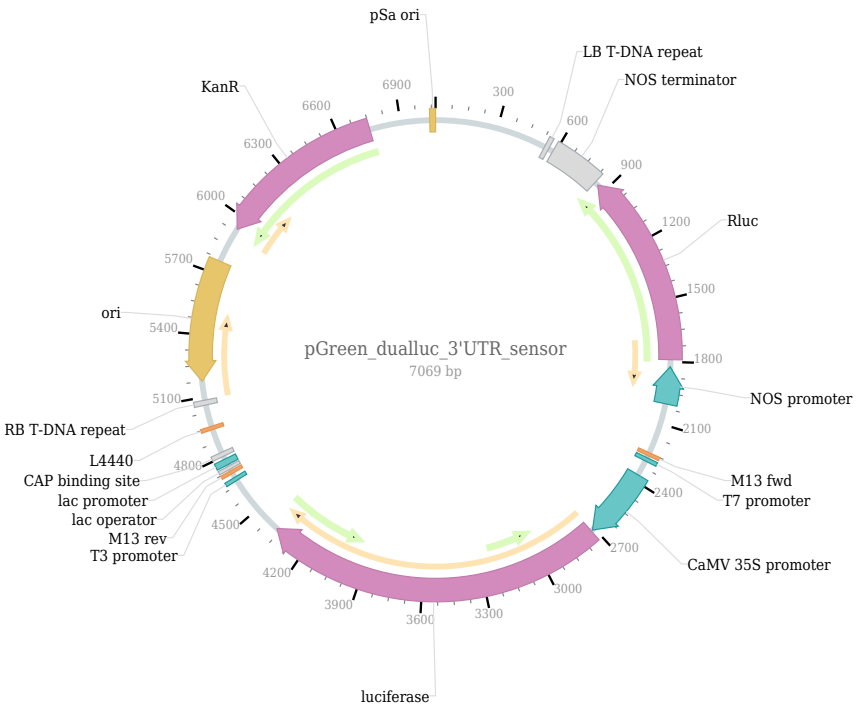
pGreen_dualluc_3'UTR_sensor

Vector ID	V007388
Antibiotic Resistance	Kanamycin
Length	7069 bp
Vector Type	Luciferase ; Plant transient expression
Host	Plants

Product Information

Replication Origin	pSa ori
Copy Number	High Copy
Promoter	CaMV 35S
Growth Strain(s)	Stbl3
Comment	The pGreen dual-luciferase 3'UTR sensor is a pGreenII-based reporter vector for quantifying plant miRNA repression in Nicotiana benthamiana. It carries NOS-driven Renilla luciferase as an internal control, with miRNA target sequences inserted into the artificial 3'UTR of 35S-driven firefly luciferase. Repression strength is measured via dual-luciferase luminescence (protein level) and qRT-PCR (mRNA level) after agroinfiltration. This vector specifically assesses miRNA activity when binding sites locate in transcript 3'UTR, contrasting with the ORF sensor variant. It reveals that plant targets with 3'-end mismatches often outperform perfectly matched sites within the 3'UTR context.

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 ℃.