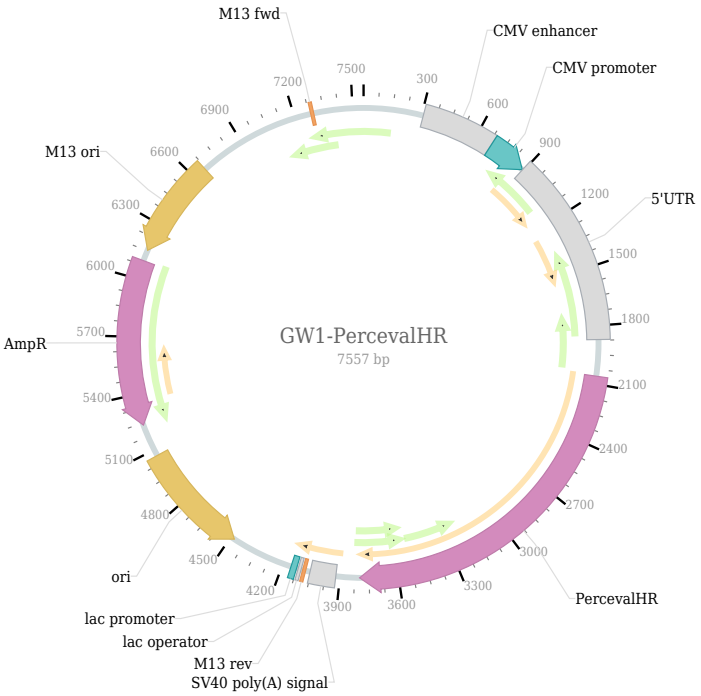
GW1-PercevalHR

Vector ID	V016715
Antibiotic Resistance	Ampicillin
Length	7557 bp
Vector Type	Protein expression
Host	Mammalian cells

Product Information

Replication Origin	ori
Promoter	CMV
Growth Strain(s)	DH10B
Growth Temperature	37℃
Comment	GW1-PercevalHR is a mammalian expression vector (CMV promoter) of PercevalHR, a fluorescent sensor of ATP-to-ADP ratio. PercevalHR is a ratiometric ATP:ADP biosensor made of a nucleotide-sensing GlnK domain fused with circularly permuted Venus (cpVenus). MgATP and ADP compete for the sensor's binding pocket, triggering distinct fluorescence rises at 500 nm and 420 nm respectively. The F_{500}/F_{420} ratio directly reports ATP/ADP levels with fast (seconds-scale) responses. Its pH bias can be corrected via pHRed, and it supports one/two-photon live-cell imaging.

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 ℃.