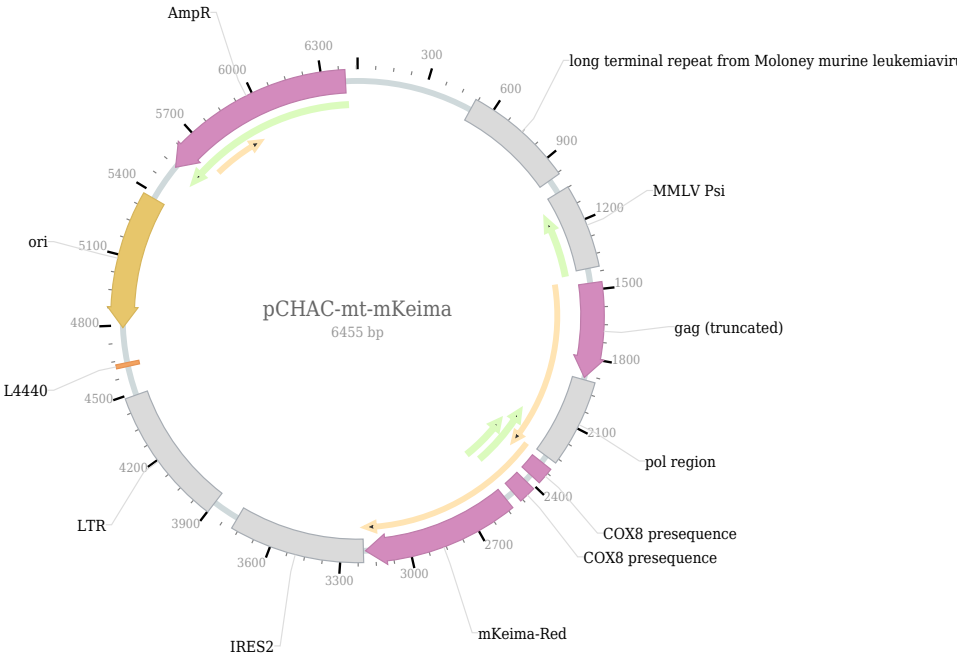
pCHAC-mt-mKeima

Vector ID	V012220
Antibiotic Resistance	Ampicillin
Length	6455 bp
Vector Type	Retroviral

Product Information

Replication Origin	ori
Copy Number	High Copy
Cloning Method	Restriction Enzyme
5' Primer	TGACCTGGGAAGCCTTGGCT
3' Primer	TTGCCAAAAGACGGCAATAT
Growth Strain(s)	DH10B
Comment	pCHAC-mt-mKeima is a retroviral reporter plasmid carrying mitochondria-targeted mKeima pH sensor. Its COX8 leader peptide delivers mKeima into mitochondrial matrix, which shifts excitation wavelength under lysosomal acidic environment to quantify mitophagy ratiometrically. This vector enables high-throughput mitophagy measurement via flow cytometry as used in the PINK1/Parkin mitophagy study. It reliably distinguishes intact mitochondria from those engulfed by autolysosomes without GFP quenching artifacts.

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 ℃.