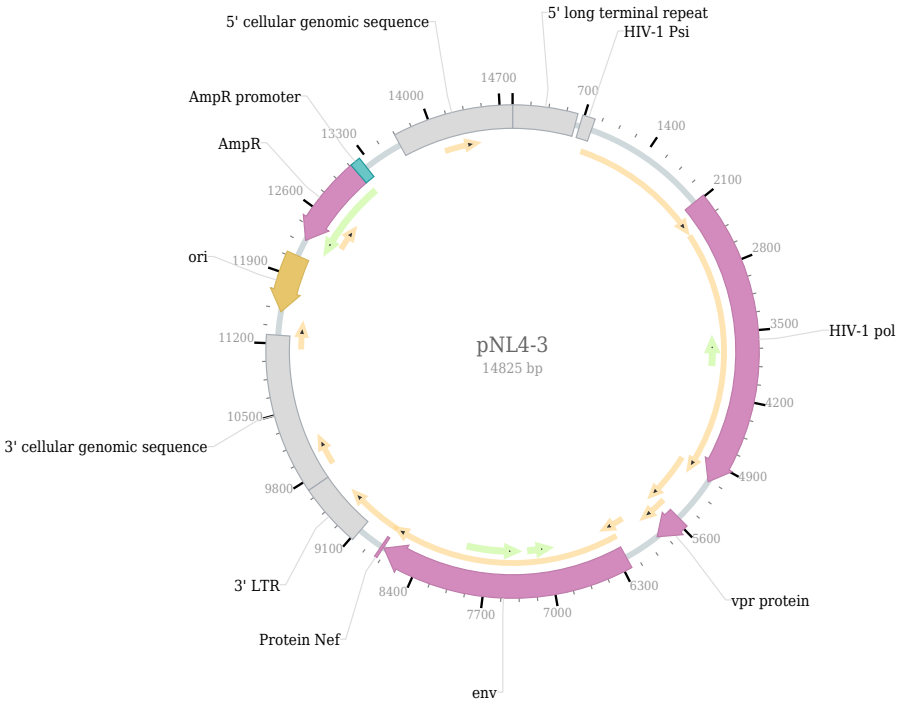
pNL4-3

Vector ID	V004299
Antibiotic Resistance	Ampicillin
Length	14825 bp
Vector Type	HIV-1 vector

Product Information

Replication Origin	ori
Source/Author	Adachi A, Gendelman HE, Koenig S, Folks T, Willey R, Rabson A, Martin MA.
Copy Number	High copy number
Growth Strain(s)	stbl3
Growth Temperature	30℃
Comment	pNL4-3 (14,825 bp) is a full-length HIV-1 proviral DNA molecular clone widely used as a reference strain in AIDS research. It carries the entire HIV-1 NL4-3 genome, including all nine viral genes (gag, pol, env, tat, rev, nef, vif, vpr, vpu), flanked by 5‘ and 3’ cellular genomic sequences and flanking LTRs (Long Terminal Repeats) that control viral transcription and integration. The plasmid also encodes Protein Nef for studying viral pathogenesis. Upon transfection into suitable mammalian cells, pNL4-3 produces replication-competent HIV-1 virions, making it an essential tool for studying viral replication, drug resistance, and vaccine development. The vector backbone includes AmpR for bacterial selection and a pUC origin for high-copy replication in E. coli, typically grown at 30 °C in NEB Stable or Stbl3 cells to prevent LTR recombination

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 ℃.