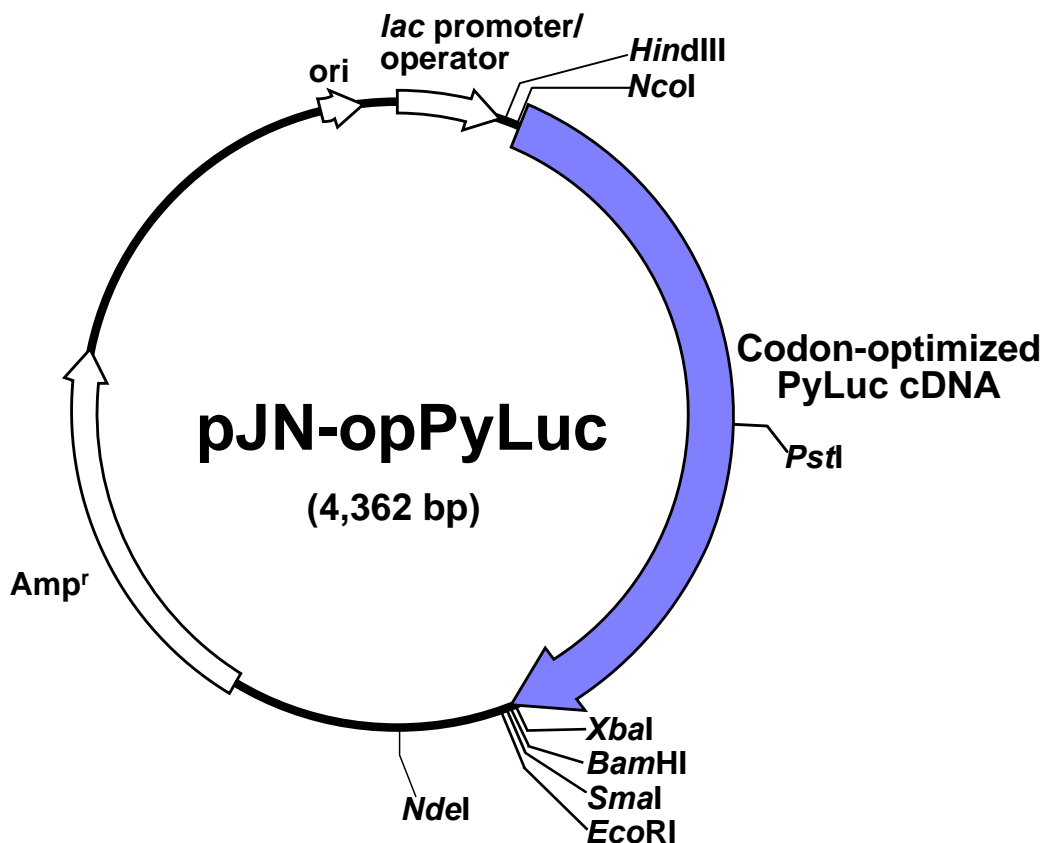


pJN-opPyLuc	
Cat. No.	P-005
Gene/Insert name:	Codon-optimized firefly luciferase of <i>Photinus pyralis</i> (opPyLuc)
Vector backbone:	pUC-JN
Vector type:	<i>E. coli</i>
Backbone size w/o insert (bp):	2,680
Bacterial resistance:	Ampicillin
Growth strain:	JM83
Growth temperature (°C):	37
Growth instructions:	pJN-opPyLuc is resistant to ampicillin (50 µg/mL)
High or low copy:	High copy
Vector map:	pJN-opPyLuc
Coding sequence:	Nucleotide sequence & Amino acid sequence
Plasmid sequence:	pJN-opPyLuc (4,362 bp)
Restriction enzyme list:	Restriction enzyme sites of pJN-opPyLuc
GenBank Accession No.:	LC006854
Size:	10 µg
Terms and Licenses:	MTA
Laboratory Reagent For Research Use Only	

Firefly Luciferase (*Photinus pyralis*), PyLuc

Cat. No. P-005

Name: pJN-opPyLuc
Insert: Codon-optimized firefly luciferase of *Photinus* (PyLuc) cDNA
Vector: pUC-JN (pUC9 derivative)



• DNA fragment:

`aagctt.....cacc ATG-GAG-GAC-GCC-.....-AGC-AAG-CTG-TAA tctaga`
HindIII (Kozak) *XbaI*

• Feature for pJN-opPyLuc:

Residue	Source	Comments
1-245	1-245	pUC-JN backbone (pUC9 derivative)
1-230	1-230	lac promoter/operator
275-1,924	1-1,650	Codon-optimized PyLuc ORF
1,928-4,362	294-2,728	pUC-JN backbone (pUC9 derivative)
4,189	2,555	ori: Origin of replication
2,561-3,421	927-1,787	Amp ^r : Ampicillin resistance gene

Ref.

- 1) PyLuc amino acid seq. & cDNA seq.: GenBank Accession No. M15077 de Wet, J.R. et al. *Mol. Cell. Biol.* (1987) 7: 725-737.
- 2) Codon-optimized PyLuc DNA seq.: GenBank Accession No. LC006854 Inouye, S. et al. *Protein Expr. Purif.* (2015) 109: 47-54

Gene coding region (ORF: Codon-optimized PyLuc)

Nucleotide sequence

AAGCTTGGCAATCCGGTACTGTTGGTAAAGCCACC**ATGGAGGACGCCAAGAACATCAAGAAGGGCCCCGC**
CCCCTTTTACCCCTGGAGGACGGCACCCGGCGGAGCAGCTGCACAAGGCCATGAAGAGATACGCCCTG
GTCCCCGGCACCATCGCTTTACCGACGCCACATCGAGGTCAACATCACCTACGCCGAGTACTTTGAGA
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GCAAGAAGGGCCTCCAGAAGATCCTGAACGTCCAGAAGAAGCTGCCCATCATCCAGAAGATCATCATCAT
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CAGAGACCCCATCTTTGGCAACCAGATCATCCCCGACACCGCCATCCTGAGCGTCGTCCCCTTTCACCAC
GGCTTTGGCATGTTTACCACCTGGGCTACCTGATCTGCGGCTTTAGAGTCTGTCCTGATGTACAGATTG
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GCTACGGCCTGACCGAGACCACCAGCGCCATCCTGATCACCCCGAGGGCGACGACAAGCCCGGCGCCGT
CGGCAAGGTTCGTCCCCTTTTTTTGAGGCCAAGGTTCGTGGACCTGGACACCGGCAAGACCCTGGGCGTCAAC
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CGCCAGCCAGGTACCACCGCCAAGAAGCTGAGAGGCGGCGTCTCTTTGTGGACGAGGTCCCCAAGGGC
CTGACCGGCAAGCTGGACGCCAGAAAGATCAGAGAGATCCTGATCAAGGCCAAGAAGGGCGGCAAGAGCA
AGCTGTAATCTAGA

Amino acid sequence

AWQSGTVGKAT**M**EDAKNIKKGPAPFYPLEDGTAGEQLHKAMKRYALVPGTIAFTDAHIEVNITYAEYFEM
 SVRLAEAMKRYGLNNTNHRIVVCSENSLQFFMPVLGALFIGVAVAPANDIYNERELLNSMNISQPTVVFVS
 KKGLQKILNVQKLP I IQKI I IMDSKTDYQGFQSMYTFVTSHLPPGFNEYDFVPESFDRDKTIALIMNSS
 GSTGLPKGVALPHRTACVRFSHARDPIFGNQIIPDTAILS VVPFHGFGMFTTLGYLICGFRVVLMYRFE
 EELFLRSLQDYKIQSALLVPTLFSFFAKSTLIDKYDLSNLHEIASGGAPLSKEVGEAVAKRFHLPGIRQG
 YGLTETTSAILITPEGDDKPGAVGKVVPPFEAKVVDLDTGKTLGVNQRGELCVRGPMIMSGYVNNPEATN
 ALIDKDGWLHSGD IAYWDEDEHFFIVDRLKSLIKYKGYQVAPAELES ILLQHPNIFDAGVAGLPDDDAGE
 LPAAVVVLEHGKTMTEKEIVDYVASQVTTAKLLRGGVVVDEVPKGLTGKLDARKIREILI KAKKGGKSK
 L*SR

pJN-opPyLuc (4,362 bp)

GCGCCCAATACGCAAACC GCCTCTCCCCGCGCGTTGGCCGATTCATTAATGCAGCTGGCAGCAGAGTTT
CCCGACTGAAAGCGGGCAGTGAGCGCAACGCAATTAATGTGAGTTAGCTCACTCATTAGGCACCCCAGG
CTTTACACTTTATGCTTCCGGCTCGTATGTTGTGTGGAATTGTGAGCGGATAACAATTTACACAGGAAA
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CAAGACCATCGCCTGATCATGAACAGCAGCGGCAGCACCGGCTGCCAAGGGCGTCGCCCTGCCCCAC
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GATAACCGTATTACCGCTTTGAGTGAGCTGATACCGCTCGCCGACGCCAAGCAGCCGAGCGCAGCGAGT
CAGTGAGCGAGGAAGCGGAAGA

Residue	Source	Comments
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4,189	2,555	ori: Origin of replication
2,561-3,421	927-1,787	Amp ^r : Ampicillin resistance gene

Restriction enzyme sites of pJN-opPyLuc

Indication Mode: 5'Terminal of the Site

Enzyme	Sequence	Count	Start Position				
AccI	GT!MKAC	0					
ApaI	GGGCC!C	1	301				
Asp718I	G!GTACC	0					
BamHI	G!GATCC	1	1934				
BclI	T!GATCA	5	855	1323	1461	1596	1890
BglII	A!GATCT	0					
EcoRI	G!AATTC	1	1952				
EcoRV	GAT!ATC	0					
HindIII	A!AGCTT	1	240				
KpnI	GGTAC!C	0					
MluI	A!CGCGT	0					
NcoI	C!CATGG	1	273				
NdeI	CA!TATG	1	2173				
NheI	G!CTAGC	0					
NotI	GC!GGCCGC	0					
PstI	CTGCA!G	1	1103				
SacI	GAGCT!C	0					
SalI	G!TCGAC	0					
ScaI	AGT!ACT	2	438	2865			
SmaI	CCC!GGG	1	1939				
XbaI	T!CTAGA	1	1928				
XhoI	C!TCGAG	0					

Supplier	Contact us
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