

<b>pJNC-opRL547</b>	
<b>Cat. No.</b>	P-110
<b>Gene/Insert name:</b>	Red-shifted codon-optimized <i>Renilla</i> luciferase (opRLuc547)
<b>Vector backbone:</b>	pCMV-JNC
<b>Vector type:</b>	Mammalian cells
<b>Backbone size w/o insert (bp):</b>	5,408
<b>Bacterial resistance:</b>	Ampicillin and neomycin
<b>Growth strain:</b>	JM83
<b>Growth temperature (°C):</b>	37
<b>Growth instructions:</b>	pJNC-opRL547 is resistant to ampicillin and neomycin
<b>High or low copy:</b>	High copy
<b>Vector map:</b>	<a href="#">pJNC-opRL547</a>
<b>Coding sequence:</b>	<a href="#">Nucleotide sequence &amp; Amino acid sequence</a>
<b>Restriction enzyme list:</b>	<a href="#">Restriction enzyme sites of pJNC-opRL547</a>
<b>GenBank Accession No.:</b>	—
<b>Size:</b>	10 µg
<b>Terms and Licenses:</b>	MTA
<b>Laboratory Reagent For Research Use Only</b>	

## Mammalian expression vector:

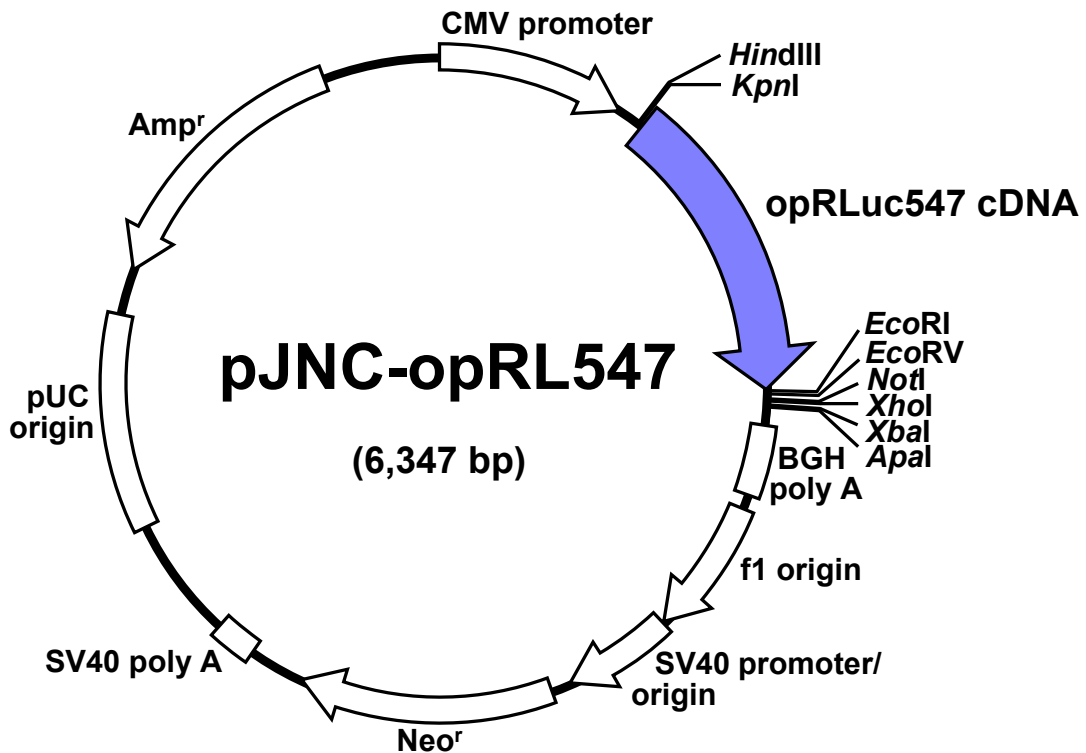
# Red-shifted Codon-optimized *Renilla* Luciferase, opRLuc547

Cat. No. P-110

Name: pJNC-opRL547

Insert: Red-shifted codon-optimized *Renilla reniformis* luciferase cDNA (547 nm peak)

Vector: pCMV-JNC



• Feature for pJNC-opRL547:

Residue	Source	Comments
1-669	1-669	pCMV-JNC backbone
1-588	1-588	CMV promoter
632-651	632-651	T7 promoter
673-1,605	1-933	opRLuc547 ORF
1,609-6,347	707-5,445	pCMV-JNC backbone
1,670-1,687	768-785	Sp6 promoter
1,717-1,937	811-1,035	BGH polyadenylation sequence
1,983-2,411	1,081-1,509	f1 origin
2,416-2,759	1,514-1,857	SV40 early promoter and origin
2,821-3,615	1,919-2,713	Neomycin resistance gene (ORF)
3,789-3,919	2,887-3,017	SV40 early polyadenylation signal
4,302-4,975	3,400-4,073	pUC origin
5,120-5,980	4,218-5,078	Ampicillin resistance gene (ORF)

Ref.

- 1) Loening, A. M. *et al. Nat. Methods* (2007) 4: 641-643.
- 2) Red-shifted codon-optimized RLuc DNA seq.: GenBank Accession No. XXXXXX  
Inouye, S. *et al.* unpublished.

**Gene coding region**  
**(ORF: Red-shifted codon-optimized *Renilla luciferase/opRLuc547*)**

**Nucleotide sequence**

AAGCTTGGTACCACC**ATGGCCAGCAAGGTGTACGACCCCGAGCAGAGAAAGAGAATGATCACCGGCCCCC**  
**AGTGGTGGGCCAGATGCAAGCAGATGAACGTGCTGGACAGCTTCATCAACTACTACGACAGCGAGAAGCA**  
**CGCCGAGAACCCGTGATCTTCTGCACGGCAACGCCACCAGCAGCTACCTGTGGAGACACGTGGTGCCC**  
**CACATCGAGCCCCTGGCCAGATGCATCATCCCCGACCTGATCGGCATGGGCAAGAGCGGCAAGAGCGGCA**  
**ACGGCAGCTACAGACTGCTGGACCACTACAAGTACCTGACCGCCTGGTTCGAGCTGCTGAACCTGCCCAA**  
**GAAGATCATCTTCGTGGGCCACGACTGGGGCAGCGCCCTGGCCTTCCACTACGCCTACGAGCACCAGGAC**  
**AGAATCAAGGCCATCGTGCACATGGAGAGCGTGGTGGACGTGATCGAGAGCTGGGCCGGCTGGCCCGACA**  
**TCGAGGAGGAGGTGGCCCTGATCAAGAGCGAGGAGGGCGAGAAGATGGTGCCTGGAGAACAACCTTCCTCGT**  
**GGAGACCGTGCTGCCCAGCAAGATCATGAGAAAGCTGGAGCCCAGGAGTTCGCCGCCCTACCTGGAGCCC**  
**TTCAAGGAGAAGGGCGAGGTGAGAAGACCCACCCTGAGCTGGCCCAGAGAGATCCCCCTGGTGAAGGGCG**  
**GCAAGCCCAGCTGGTGCAGATCGTGAGAAACTACAACGCCTACCTGAGAGCCAGCGACGACCTGCCCAA**  
**GCTGTTTCATCGAGAGCGACCCCGGCTTCTGGAGCAACGCCATCGTGGAGGGCGCCAAGAAGTTCGCCAAC**  
**ACCGAGTTCGTGAAGGTGAAGGGCCTGCACTTCTGTCAGGAGGACGCCCCGACGAGATGGGCAAGTACA**  
**TCAAGAGCTTCGTGGAGAGAGTGCTGAAGAACGAGCAG****TAAGAATTC**

**Amino acid sequence**

**MASKVYDPEQRKRMITGPQWWARCKQMNVLDSFINYYDSEKHAENAVIFLHGNATSSYLWRHVVPPIEPV**  
**ARCIIPDLIGMGKSGKSGNGSYRLLDHYKYLTAWFELLNLPKKIIFVGHWDWGSALAFHYAYEHQDRIKAI**  
**VHMESVVDVIESWAGWPDIEEEVALIKSEEKGMVLENNFFVETVLP SKIMRKLEPEEFAAYLEPFKEKG**  
**EVRRP T LSWPREIPLVKGGKPDVVQIVRNYNAYLRASDDL PKLFIESDPGFWSNAIVEGAKKFPNTEFVK**  
**VKGLHFLQEDAPDEM GKYIKSFVERVLKNEQ\***

**Restriction enzyme sites of pJNC-opRL547**

Enzyme Name	Sequence	Count	Cutting Positions
AccI	GT!MKAC	3	3921, 3928, 6116
ApaI	GGGCC!C	1	1665
Asp718I	G!GTACC	1	665
BamHI	G!GATCC	0	-
BclI	T!GATCA	4	714, 1167, 1701, 2791
BglII	A!GATCT	1	6129
EcoRI	G!AATTC	1	1610
EcoRV	GAT!ATC	1	1622
HincII	GTY!RAC	3	4, 3929, 6117
HindIII	A!AGCTT	1	659
KpnI	GGTAC!C	1	669
MluI	A!CGCGT	0	-
NcoI	C!CATGG	4	380, 672, 2647, 3382
NdeI	CA!TATG	1	254
NheI	G!CTAGC	0	-
NotI	GC!GGCCGC	1	1637
PstI	CTGCA!G	3	1536, 1619, 3003
SacI	GAGCT!C	2	588, 1697
SalI	G!TCGAC	2	3927, 6115
ScaI	AGT!ACT	1	5674
SmaI	CCC!GGG	1	2763
StuI	AGG!CCT	1	2739
XbaI	T!CTAGA	1	1655
XhoI	C!TCGAG	1	1643

Supplier	Contact us
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