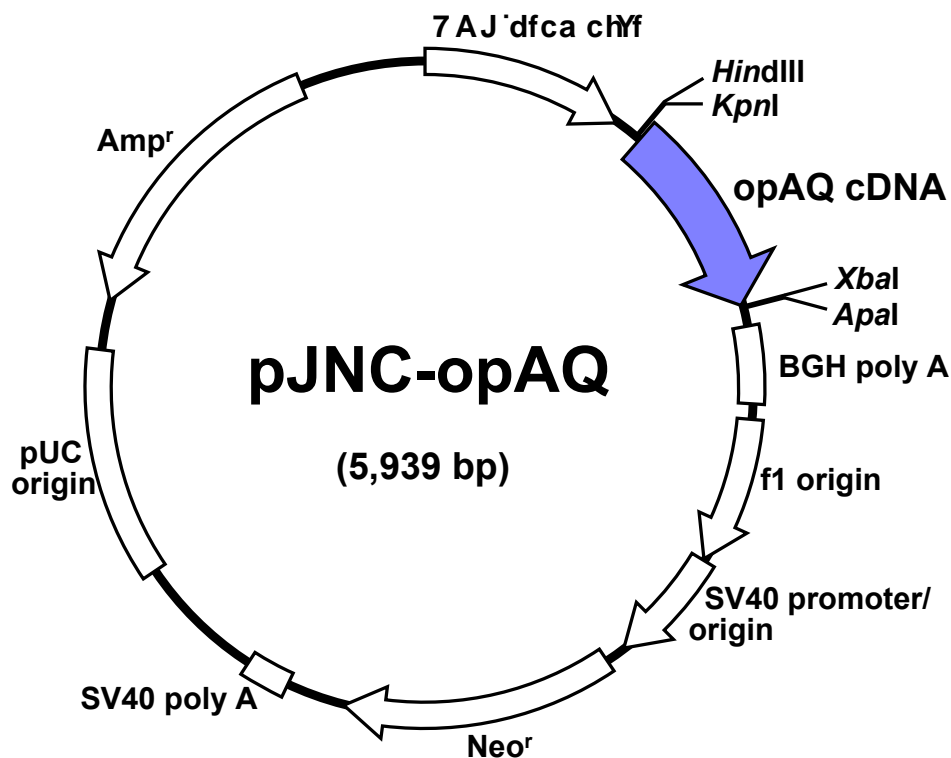


<b>pJNC-opAQ</b>	
<b>Cat. No.</b>	P-103
<b>Gene/Insert name:</b>	Codon-optimized Aequorin (opAQ)
<b>Vector backbone:</b>	pCMV-JNC
<b>Vector type:</b>	Mammalian cells
<b>Backbone size w/o insert (bp):</b>	5,363
<b>Bacterial resistance:</b>	Ampicillin and neomycin
<b>Growth strain:</b>	JM83
<b>Growth temperature (°C):</b>	37
<b>Growth instructions:</b>	pJNC-opAQ is resistant to ampicillin and neomycin
<b>High or low copy:</b>	High copy
<b>Vector map:</b>	<a href="#">pJNC-opAQ</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-opAQ</a>
<b>GenBank Accession No.:</b>	<a href="#">LC006263</a>
<b>Size:</b>	10 µg
<b>Terms and Licenses:</b>	MTA
<b>Laboratory Reagent For Research Use Only</b>	

# Mammalian expression vector: Ca<sup>2+</sup>-Binding Photoprotein, Aequorin

Cat. No. P-103

Name: pJNC-opAQ  
Insert: Codon-optimized Aequorin cDNA  
Vector: pCMV-JNC



• Feature for pJNC-opAQ:

Residue	Source	Comments
1-669	1-669	pCMV-JNC backbone
1-588	1-588	CMV promoter
632-651	632-651	T7 promoter
673-1,242	1-570	Codon-optimized Aequorin ORF
1,246-5,939	752-5,445	pCMV-JNC backbone
1,262-1,279	768-785	Sp6 promoter
1,305-1,529	811-1,035	BGH polyadenylation sequence
1,575-2,003	1,081-1,509	f1 origin
2,008-2,351	1,514-1,857	SV40 early promoter and origin
2,413-3,207	1,919-2,713	Neomycin resistance gene (ORF)
3,381-3,511	2,887-3,017	SV40 early polyadenylation signal
3,894-4,567	3,400-4,073	pUC origin
4,712-5,572	4,218-5,078	Ampicillin resistance gene (ORF)

Ref.

- 1) Aequorin amino acid seq. & cDNA seq.: GenBank Accession No. AAA27719  
Inouye, S. *et al. Proc. Natl. Acad. Sci. USA* (1985) 82: 3154-3158.
- 2) Codon-optimized Aequorin DNA seq.: GenBank Accession No. LC006263  
Inouye, S. *et al. Protein Expr. Purif.* (2015) 109: 47-54

**Gene coding region (ORF: Codon-optimized Aequorin/opAQ)**

**Nucleotide sequence**

AAGCTTGGTACCACC**ATGGTCAAGCTGACCAGCGACTTCGACAACCCAGATGGATCGGCAGACACAAGC**  
**ACATGTTCAACTTCCTGGACGTCAACCACAACGGCAAGATCAGCCTGGACGAGATGGTCTACAAGGCCAG**  
**CGACATCGTCATCAATAACCTGGGCGCCACCCCGAGCAGGCCAAGAGACACAAGGACGCCGTCGAGGCC**  
**TTCTTCGGCGGCGCCGGCATGAAGTACGGCGTCGAGACCGACTGGCCCGCTACATCGAGGGCTGGAAGA**  
**AGCTGGCCACCGATGAGCTGGAGAAGTACGCCAAGAACGAGCCACCCCTGATCAGAATCTGGGGCGACGC**  
**CCTGTTGACATCGTGGACAAGGACCAGAACGGCGCCATCACCCCTGGACGAGTGGAAAGGCCACACCAAG**  
**GCCGCCGGCATCATCCAGAGCAGCGAGGACTGCGAGGAGACCTTCAGAGTCTGCGACATCGATGAGAGCG**  
**GCCAGCTGGACGTGGACGAGATGACCAGACAGCACCTGGGCTTCTGGTACACAATGGACCCCGCTGCGA**  
**GAAGCTGTACGGCGGCGCCGTCCCC**TAATCTAGA

**Amino acid sequence**

**MV**KLTSDFDNPRWIGRHKHMFNFLDVNHNGKISLDEMVKASDIVINNLGATPEQAKRHKDAVEAFFGGA  
GMKYGVETDWPAYIEGWKKLATDELEKYAKNEPTLIRIWGDALFDIVDKDQNGAITLDEWKAYTKAAGII  
QSSEDCEETFRVCDIDESGQLDVDEMTRQHLLGFWYTMDPACEKLYGGAVP\*

**Restriction enzyme sites of pJNC-opAQ**

Enzyme Name	Sequence	Count	Cutting Positions
AccI	GT!MKAC	4	786, 3513, 3520, 5708
ApaI	GGGCC!C	1	1257
Asp718I	G!GTACC	1	665
BamHI	G!GATCC	0	-
BclI	T!GATCA	3	987, 1293, 2383
BglII	A!GATCT	1	5721
EcoRI	G!AATTC	0	-
EcoRV	GAT!ATC	0	-
HincII	GTY!RAC	4	4, 751, 3521, 5709
HindIII	A!AGCTT	1	659
KpnI	GGTAC!C	1	669
MluI	A!CGCGT	0	-
NcoI	C!CATGG	4	380, 672, 2239, 2974
NdeI	CA!TATG	1	254
NheI	G!CTAGC	0	-
NotI	GC!GGCCGC	0	-
PstI	CTGCA!G	1	2595
SacI	GAGCT!C	2	588, 1289
SalI	G!TCGAC	2	3519, 5707
ScaI	AGT!ACT	1	5266
SmaI	CCC!GGG	1	2355
StuI	AGG!CCT	3	866, 1067, 2331
XbaI	T!CTAGA	1	1247
XhoI	C!TCGAG	0	-

Supplier	Contact us
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