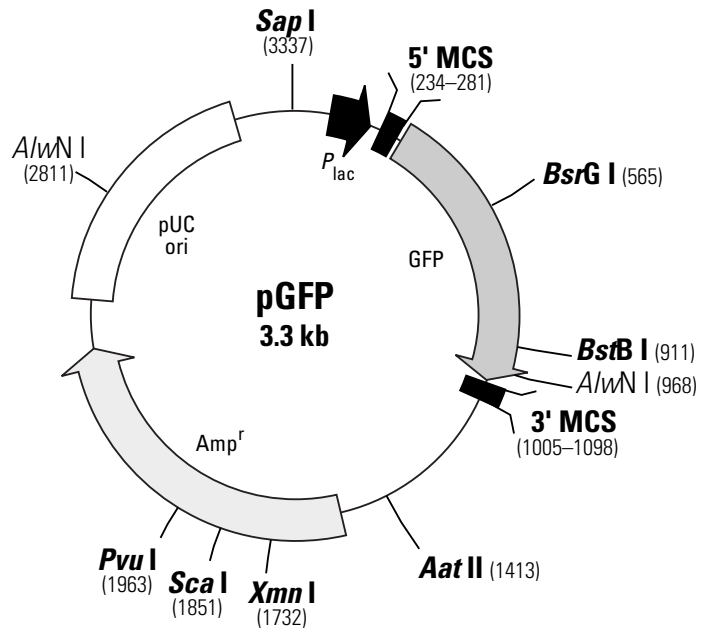


pGFP Vector Information

GenBank Accession No.: U17997

PT2039-5

Cat. No. 632370



5' MCS
LacZ
 →
ATG ACCATGATTACGCCAAGCTTGCATGCCTGCAGGTCGACTCTAGA
Hind III *Sph I* *Pst I* *Sal I* *Xba I*

GGATCCCCGGGTACCGGTAGAAAAA **ATG AGT**
BamH I *Xma I* *Sma I* *Kpn I* *Age I*
Asp718 I

3' MCS
 GFP
 stop
TAG CATTGCTAGAATTCCAACCTGAGCGCCGGTCGCTACCATTACCAA
Bsm I *EcoR I*

CTTGCTCGGTGCAAAAATAATAGGCCTACTAGTCGGCCGTACGGGCC
Stu I *Spe I* *Eag I* *BsiW I* *Bsp120 I* *Apa I*

Restriction Map and Multiple Cloning Site (MCS) of pGFP. Unique restriction sites are in bold.

Description:

pGFP carries the complete GFP coding sequence derived from the GFP cDNA by PCR (1, 2). This PCR product was cloned between the two MCSs of the pUC19 derivative pPD16.43 (2, 5). The 5' MCS lies immediately upstream from the GFP start codon; the 3' MCS lies downstream from the GFP stop codon. The GFP gene was inserted in frame with the *lacZ* initiation codon from pUC19 so that in *E. coli*, GFP is expressed from the *lac* promoter as a fusion with several additional amino acids, including the the first five amino acids of the *lacZ* protein. Note, however, that if you excise the GFP coding sequence using a restriction site in the 5' MCS, the resulting fragment will encode the native (i.e., non-fusion) GFP protein. The pUC19 backbone of pGFP provides a high copy number origin of replication and ampicillin resistance gene for propagation in *E. coli*. GFP excitation maxima = 395 nm, and the emission maxima = 509 nm.



Clontech

United States/Canada
 800.662.2566

Asia Pacific
 +1.650.919.7300

Europe
 +33.(0)1.3904.6880

Japan
 +81.(0)77.543.6116

Clontech Laboratories, Inc.
 A Takara Bio Company
 1290 Terra Bella Ave.
 Mountain View, CA 94043
 Technical Support (US)
 E-mail: tech@clontech.com
 www.clontech.com

(032113)

Location of features:

- lac promoter: 95–178
 - CAP binding site: 111–124
 - 35 region: 143–148; –10 region: 167–172
 - Transcription start point: 179
 - lac operator: 179–199
- lacZ–green fluorescent protein (GFP) fusion protein expressed in E. coli
 - Ribosome binding site: 206–209
 - Start codon (ATG): 217–219; stop codon: 1003–1005
- 5' MCS: 234–281
- Green fluorescent protein gene
 - Start codon (ATG): 289–291; stop codon: 1003–1005
 - GFP fluorescent chromophore: 481–489
- 3' MCS: 1005–1098
- Ampicillin resistance gene
 - Promoter: –35 region: 1474–1479; –10 region: 1497–1502
 - Transcription start point: 1509
 - Ribosome binding site: 1532–1536
 - β-lactamase coding sequences:
 - Start codon (ATG): 1544–1546; stop codon: 2402–2404
 - β-lactamase signal peptide: 1544–1612
 - β-lactamase mature protein: 1613–2401
- pUC plasmid replication origin: 2552–3195

Primer location:

- GFP-N Sequencing Primer (#6476-1): 352–331
- GFP-C Sequencing Primer (#6477-1): 942–964

Propagation in E. coli:

- Recommended host strain: JM109
- Selectable marker: plasmid confers resistance to ampicillin (100 µg/ml) to E. coli hosts
- E. coli replication origin: pUC
- Copy number: ≈500
- Plasmid incompatibility group: pMB1/ColE1

References:

1. Prasher, D. C., et al. (1992) *Gene* 111:229–233.
2. Chalfie, M., et al. (1994) *Science* 263:802–805.
3. Inouye, S. & Tsuji, F. I. (1994) *FEBS Letters* 341:277–280.
4. Wang, S. & Hazelrigg, T. (1994) *Nature* 369:400–403.
5. Fire, A., et al. (1990) *Gene* 93:189–198.

Notice to Purchaser

Clontech products are to be used for research purposes only. They may not be used for any other purpose, including, but not limited to, use in drugs, in vitro diagnostic purposes, therapeutics, or in humans. Clontech products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products or to provide a service to third parties without prior written approval of Clontech Laboratories, Inc.

Your use of this product is also subject to compliance with the licensing requirements described on the product's web page at <http://www.clontech.com>. It is your responsibility to review, understand and adhere to any restrictions imposed by these statements.

Clontech and the Clontech logo are trademarks of Clontech Laboratories, Inc. All other marks are the property of their respective owners. Certain trademarks may not be registered in all jurisdictions. Clontech is a Takara Bio Company. ©2013 Clontech Laboratories, Inc.

This document has been reviewed and approved by the Clontech Quality Assurance Department.