

pGFPuv Vector

Catalog No.	Amount	Lot Number
632312	20 µg	Specified on product label.

Description

pGFPuv encodes a variant of *Aequorea victoria* green fluorescent protein (GFP) that has been optimized for brighter fluorescence when excited by standard UV light. The GFPuv coding sequence is flanked by separate MCSes at the 5' and 3' ends, so the GFPuv gene can be excised from pGFPuv. Alternatively, the GFPuv coding sequences can be amplified by PCR.

pGFPuv carries the “cycle 3” variant of GFP described by Crameri *et al.* (1). This gene was cloned between the two MCSs of the pUC19 derivative pPD16.43 (2). The GFPuv gene can be easily excised from pGFPuv. Alternatively, the GFPuv coding sequence can be amplified by PCR. The GFPuv gene was inserted in frame with the *lacZ* initiation codon from pUC19 so that a β-galactosidase-GFPuv fusion protein is expressed from the *lac* promoter in *E. coli*. Note, however, that if you excise the GFPuv coding sequence using a restriction site in the 5' MCS, the resulting fragment will encode the native (i.e., non-fusion) GFPuv protein. The pUC backbone of pGFPuv provides a high copy number origin of replication and ampicillin resistance gene for propagation in *E. coli*.

Package Contents

- 20 µg pGFPuv Vector (500 ng/µl)

Storage Conditions

- Store plasmid at -20°C.
- Spin briefly to recover contents.
- Avoid repeated freeze/thaw cycles.

Shelf Life

- 1 year from date of receipt under proper storage conditions.

Storage Buffer

- 10 mM Tris-HCl (pH 8.0), 1 mM EDTA (pH 8.0)

Shipping Conditions

- Dry ice (-70°C)

Product Documents

Documents for Clontech® products are available for download at www.clontech.com/manuals
The following documents apply to this product:

- pGFPuv Vector Information

Clontech Laboratories, Inc.

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Propagation in *E. coli*

- Recommended host strain: Stellar™ Competent Cells (Cat. No. 636763)
- Selectable marker: Plasmids confer resistance to ampicillin (100 µg/ml) in *E. coli* hosts.
- *E. coli* replication origin: pUC

Excitation and Emission Maxima of pGFPuv

- Excitation: 395 nm
- Emission: 509 nm

References

1. Cramer, A., *et al.* (1996) *Nature Biotechnol.* **14**:315–319.
2. Fire, A., *et al.* (1990) *Gene* **93**:189–198.

Quality Control Data

Plasmid Identity & Purity

- Digestion with the indicated restriction enzymes produced fragments of the indicated sizes on a 0.8% agarose/EtBr gel:

Vector	Enzyme(s)	Size (kb)
pGFPuv Vector	SalI	0.6 kb & 2.7 kb
	DraI	0.7 kb, 1.1 kb, & 1.6 kb (An additional fragment of 19 bp is too small to detect by this assay.)

- Vector identity was confirmed by sequencing.
- A₂₆₀/A₂₈₀: 1.8–2.0

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