Certificate of Analysis

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. (Crameri et al. 1996). This gene was cloned between the two MCSs of the pUC19 derivative pPD16.43 (Fire, Harrison, and Dixon 1990). 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.

Expiration Date

- Specified on product label.

Storage Buffer

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

Shipping Conditions

- Dry ice

Product Documents

Documents for our products are available for download at **takarabio.com/manuals**
The following documents apply to this product:

- pGFPuv Vector Information
- pGFPuv Vector Sequence in GenBank Format

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(011623)

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

Crameri, A., et al. Improved Green Fluorescent Protein by Molecular Evolution Using DNA Shuffling. *Nat. Biotechnol.* **14,** 315–319 (1996).

Fire, A., Harrison, S. W. & Dixon, D. A modular set of lacZ fusion vectors for studying gene expression in Caenorhabditis elegans. *Gene* **93,** 189–198 (1990).

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	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.
- A_{260}/A_{280}: 1.8–2.0

It is certified that this product meets the above specifications, as reviewed and approved by the Quality Department.

Notice to Purchaser

pGFPuv Vector

CATALOG NO.

632312

NOTICE TO PURCHASER:

Our products are to be used for **Research Use Only**. They may not be used for any other purpose, including, but not limited to, use in humans, therapeutic or diagnostic use, or commercial use of any kind. Our 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 our prior written approval.

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

TRADEMARKS:

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