Certificate of Analysis

pGL4.21[*luc2P*/Puro] Vector:

Part No.	Size
E676A	20µg

Instructions for use of this product can be found in the pGL4 Vectors Technical Manual #TM259, available online at: **www.promega.com/protocols**

Part# 9PIE676
Revised 5/13

Description: The pGL4.21[*luc2P*/Puro] Vector[a–f] encodes the luciferase reporter gene *luc2P* (*Photinus pyralis*) and is designed for high expression and reduced anomalous transcription. This vector also contains a mammalian selectable marker for puromycin resistance in which the number of transcription factor binding sites has been reduced and mammalian codon usage optimized. This vector is engineered with fewer consensus regulatory sequences for reduced background and a decreased risk of anomolous transcription and has a synthetic reporter gene, which has been codon optimized for mammalian expression.

The pGL4.21[*luc2P*/Puro] Vector is a basic vector with no promoter. However, it contains a multiple cloning region that allows cloning of a promoter of choice. The *luc2P* reporter gene contains hPEST, a protein destabilization sequence. The protein encoded by *luc2P* responds more quickly and with greater magnitude to changes in transcriptional activity than the *luc2* gene, its more stable counterpart.

Concentration: 1µg/µl.

GenBank® Accession Number: DQ188841.

Storage Buffer: The pGL4.21[*luc2P*/Puro] Vector is supplied in 10mM Tris-HCl (pH 7.4), 1mM EDTA.

Storage Conditions: See the product information label for storage temperature recommendations and expiration date. Avoid multiple freeze-thaw cycles and exposure to frequent temperature changes. These fluctuations can greatly alter product stability.

Usage Notes:

1. For easy transfer from one pGL4 Vector to another, the multiple cloning region is consistent throughout the pGL4 Vector series. For easy transfer between pGL3 Vectors and pGL4 Vectors, many of the restriction enzyme sites present in the pGL3 Vectors are also present in the pGL4 Vectors.
2. Concentration gradients may form in frozen products and should be dispersed upon thawing. Mix well prior to use.

Quality Control Assays

Nuclease Assay: Following incubation of 1µg of pGL4.21[*luc2P*/Puro] Vector in standard restriction digest buffers at 37°C for 16–24 hours, no evidence of nuclease activity is detected by agarose gel electrophoresis.

Physical Purity: $A_{260}/A_{280} \geq 1.80$, $A_{260}/A_{250} \geq 1.05$ at pH 7.4.

Sequence: The pGL4.21[*luc2P*/Puro] Vector has been completely sequenced by single-strand sequencing and has 100% identity with the published sequence, available at: **www.promega.com/vectors**

Signed by: J. Stevens

J. Stevens, Quality Assurance

Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711-5399 USA
Telephone 608-274-4330
Toll Free 800-356-9526
Fax 608-277-2516
Internet www.promega.com

[a]READ THIS FIRST BEFORE OPENING PRODUCT
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[b]U.S. Pat. No. 5,670,356.

[c]Patent Pending.

[d]U.S. Pat. No. 8,008,006 and European Pat. No. 1341808.

[e]U.S. Pat. No. 7,728,118.

[f]The method of recombinant expression of *Coleoptera* luciferase is covered by U.S. Pat. Nos. 5,583,024, 5,674,713 and 5,700,673. A license (from Promega for research reagent products and from The Regents of the University of California for all other fields) is needed for any commercial sale of nucleic acid contained within or derived from this product.

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pGL4.21[*luc2P*/Puro] Vector Features List and Maps

Multiple cloning region	1–70
luc2P reporter gene	100–1875
SV40 late poly(A) signal	1915–2136
SV40 early enhancer/promoter	2184–2602
Synthetic puromycin-N-acetyltransferase (Puro^r) coding region	2627–3226
Synthetic poly(A) signal	3251–3299
Reporter Vector primer 4 (RVprimer4) binding region	3366–3385
*Col*E1-derived plasmid replication origin	3623
Synthetic ß-lactamase (Amp^r) coding region	4414–5274
Synthetic poly(A) signal/transcriptional pause site	5379–5532
Reporter Vector primer 3 (RVprimer3) binding region	5481–5500

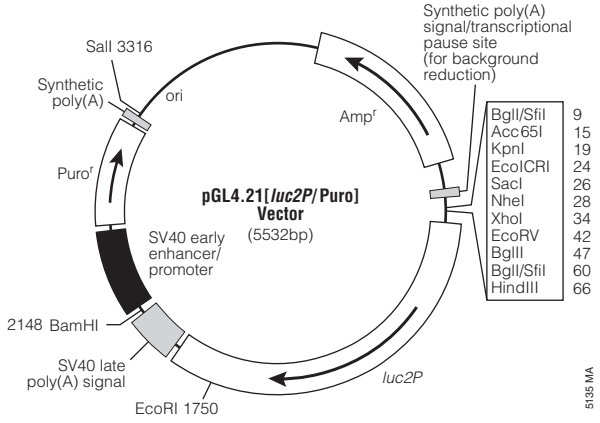

Figure 1. pGL4.21[*luc2P*/Puro] Vector map.

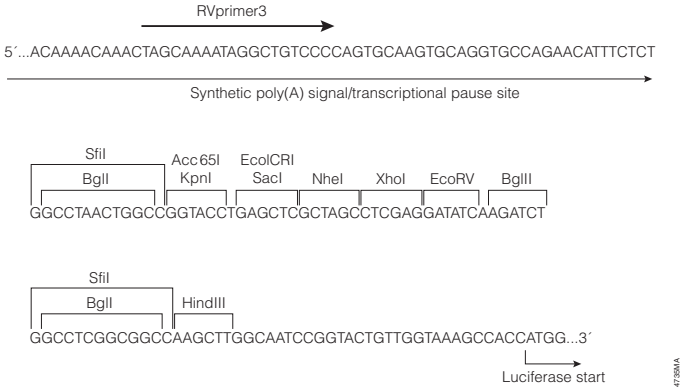

Figure 2. Multiple cloning region of the pGL4.21[*luc2P*/Puro] Vector.

Sequence information, vector maps and restriction enzyme tables for the pGL4 Vectors are available online at: **www.promega.com/vectors**

Further information on the use of pGL4 Vectors is available in Technical Manual #TM259, which is available online at: **www.promega.com/protocols**

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