

Certificate of Analysis

pGL4.22[*luc2CP/Puro*] Vector:

Part No. Size
E677A 20µg



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

Description: The pGL4.22[*luc2CP/Puro*] Vector^(a-f) encodes the luciferase reporter gene *luc2CP* (*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 also engineered with fewer consensus regulatory sequences for reduced background and a decreased risk of anomalous transcription and has a synthetic reporter gene, which has been codon optimized for mammalian expression.

The pGL4.22[*luc2CP/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 *luc2CP* reporter gene contains two protein destabilization sequences, hCL1 and hPEST. The protein encoded by *luc2CP* 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: DQ188842.

Storage Buffer: The pGL4.22[*luc2CP/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 pGL4.22[*luc2CP/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 pGL4.22[*luc2CP/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, Quality Assurance

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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.

Part# 9PIE677
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pGL4.22[*luc2CP*/Puro] Vector Features List and Maps

Multiple cloning region	1–70
<i>luc2CP</i> reporter gene	100–1929
SV40 late poly(A) signal	1966–2187
SV40 early enhancer/promoter	2235–2653
Synthetic puromycin-N-acetyltransferase (Puro ^r) coding region	2678–3277
Synthetic poly(A) signal	3302–3350
Reporter Vector primer 4 (RVprimer4) binding region	3417–3436
Col/EI-derived plasmid replication origin	3674
Synthetic β-lactamase (Amp ^r) coding region	4465–5325
Synthetic poly(A) signal/transcriptional pause site	5430–5583
Reporter Vector primer 3 (RVprimer3) binding region	5532–5551

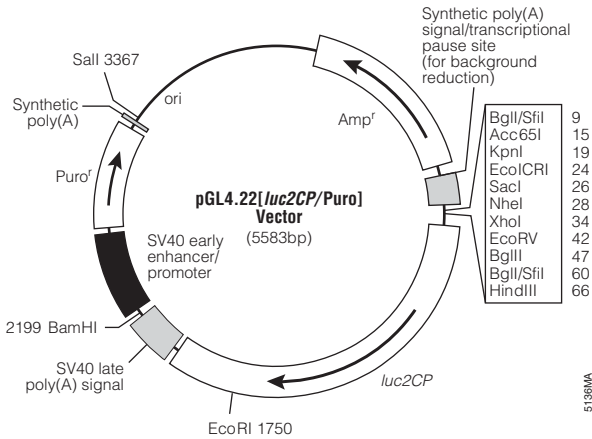


Figure 1. pGL4.22[*luc2CP*/Puro] Vector map.

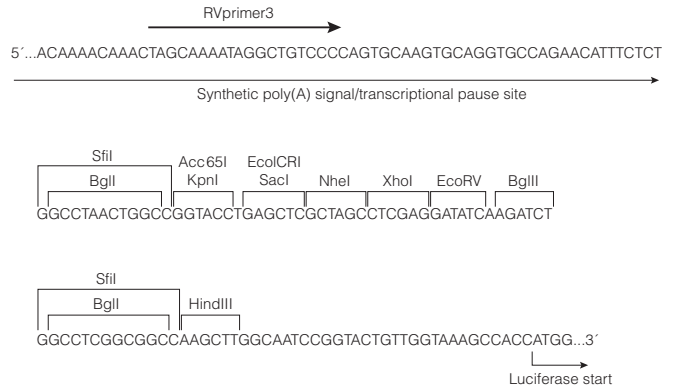


Figure 2. Multiple cloning region of the pGL4.22[*luc2CP*/Puro] Vector.

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, available online at: www.promega.com/protocols