## Product Contents

### pGL4.12[*luc2CP*] Vector:

| Part No. | Size |
|---|---|
| E667A | 20µg |

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

**Description:** The pGL4.12[*luc2CP*] Vector[a–d] encodes the luciferase reporter gene *luc2CP* (*Photinus pyralis*) and is designed for high expression and reduced anomalous transcription. The pGL4 Vectors are engineered with fewer consensus regulatory sequences and a synthetic gene, which has been optimized for mammalian expression.

The pGL4.12[*luc2CP*] Vector is a basic vector with no promoter. However, it contains a multiple cloning region to allow cloning of a promoter of choice. The *luc2CP* reporter gene contains hCL1 and hPEST, both of which are protein destabilization sequences. The protein encoded by *luc2CP* responds more quickly and with greater a magnitude to changes in transcriptional activity than the *luc2* gene, its more stable counterpart.

**Concentration:** 1µg/µl.

**GenBank® Accession Number:** AY738224.

**Storage Buffer:** The pGL4.12[*luc2CP*] Vector is supplied in 10mM Tris-HCl (pH 7.4), 1mM EDTA.

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

**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 pGL4.12[*luc2CP*] Vector in standard restriction digest buffers at 37°C for 16–24 hours, no evidence of nuclease activity was detected by agarose gel electrophoresis.

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

**Sequence:** The pGL4.12[*luc2CP*] Vector has been completely sequenced and has 100% identity with the published sequence, available at: **www.promega.com/vectors/**

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[b]Australian Pat. No. 2001 285278 and other patents pending.

[c]Patents Pending.

[d]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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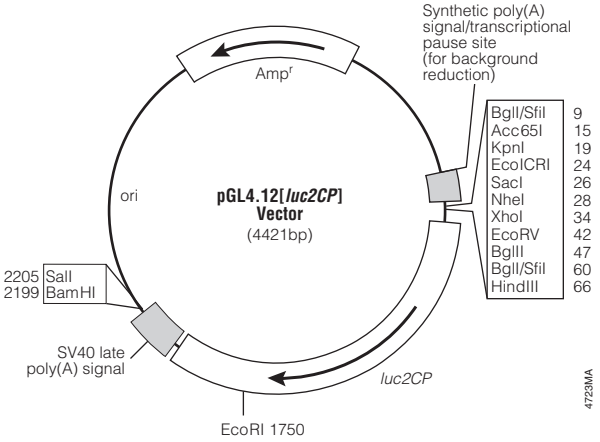
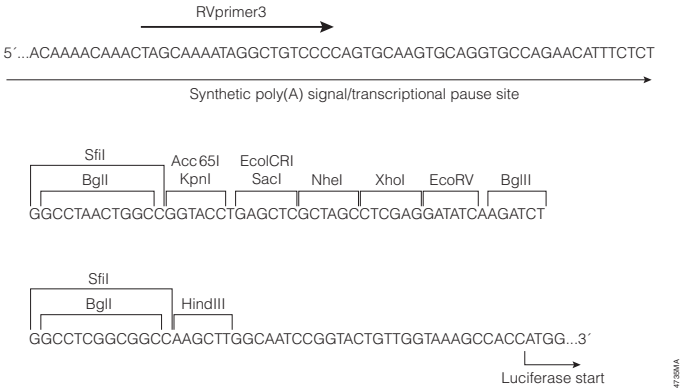
## Features List and Map for the pGL4.12[*luc2CP*] Vector

| | |
|---|---|
| Multiple cloning region | 1–70 |
| *luc2CP* reporter gene(synthetic firefly luciferase; includes hPEST, hCL1) | 100–1929 |
| SV40 late poly(A) region | 1966–2187 |
| Reporter Vector primer 4 (RVprimer4) binding region | 2255–2274 |
| *Col*E1-derived plasmid replication origin | 2512 |
| Synthetic β-lactamase (Amp$^r$) coding region | 3303–4163 |
| Synthetic poly(A) signal/transcriptional pause region | 4268–4421 |
| Reporter Vector primer 3(RVprimer3) binding region | 4370–4389 |




**Multiple cloning region of the pGL4.12[*luc2*CP] Vector.**

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