

## Certificate of Analysis

### pGL4.50[*luc2*/CMV/Hygro] Vector:

Part No.                      Size  
E131A                          20µg

Part# 9PIE131  
Revised 10/16



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

**Description:** The pGL4.50[*luc2*/CMV/Hygro] Vector<sup>(a,b,c)</sup> (Cat.# E1310) encodes the luciferase reporter gene *luc2* (*Photinus pyralis*), which has been codon optimized for mammalian expression. This vector also is engineered with fewer consensus regulatory sequences for reduced backgrounds and a decreased risk of anomalous transcription.

This vector contains the following features:

- *luc2* reporter gene for expression in mammalian cells
- CMV promoter for high translational expression
- SV40 late poly(A) signal sequence is positioned downstream of *luc2* to provide efficient transcription termination and mRNA polyadenylation
- Binding region for RV primer 3 and RV primer 4
- Synthetic poly(A) signal/transcription start site
- Synthetic Hygromycin B-resistance gene for mammalian cell selection of the plasmid
- Plasmid replication origin
- *Amp<sup>r</sup>* gene for bacterial selection for vector amplification

For more information, see the pGL4 Luciferase Reporter Vectors Technical Manual #TM259, available online at: [www.promega.com/protocols](http://www.promega.com/protocols)

**Concentration:** 1µg/µl.

**GenBank® Accession Number:** EU921840.

**Storage Buffer:** The pGL4.50[*luc2*/CMV/Hygro] 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 label for expiration date.

#### Usage Note:

Concentration gradients may form in frozen products and should be dispersed upon thawing. Mix well prior to use.

## Quality Control Assays

### Contaminant Assays

**Contaminating Nucleic Acids:** RNA, single-stranded DNA and chromosomal DNA are not evident in a specified sample of this vector as determined by agarose gel electrophoresis.

**Nuclease Assay:** Following incubation of 1µg of this vector in Restriction Enzyme Buffer at 37°C for 16–24 hours, no evidence of nuclease activity is detected by agarose gel electrophoresis.

**Physical Purity:**  $A_{260}/A_{280} > 1.80$ ;  $A_{260}/A_{250} > 1.05$ .

### Functional Assays

**Identity Assay:** The vector has been sequenced completely and has 100% identity with the published sequence available at: [www.promega.com/vectors/](http://www.promega.com/vectors/)

**Restriction Digestion:** The functional purity of this vector DNA is verified by successful incubation with a variety of restriction enzymes at 37°C for one hour. Samples are examined by agarose gel electrophoresis, comparing cut and uncut vector DNA with marker DNA.



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**Promega**

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Signed by:

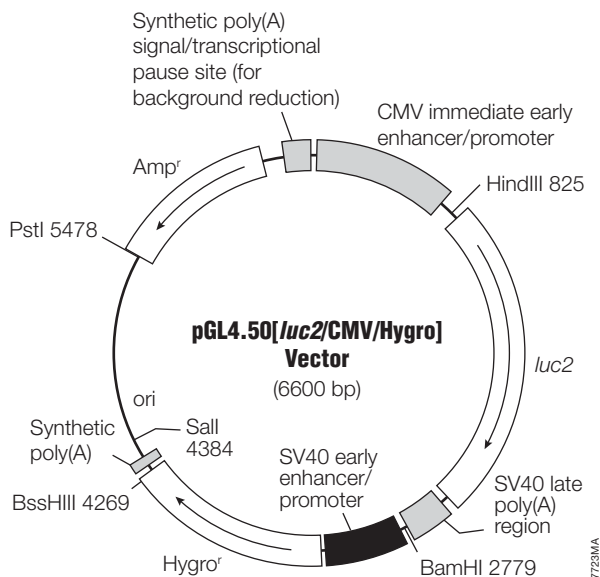
R. Wheeler, Quality Assurance



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## Features list and map for the pGL4.50[*luc2*/CMV/Hygro] Vector

CMV immediate early enhancer/promoter	14–755
<i>luc2</i>	859–2511
SV40 late poly(A) region	2546–2767
SV40 early enhancer/promoter	2815–3233
Synthetic hygromycin coding region (Hyg <sup>r</sup> )	3258–4295
Synthetic poly(A)	4319–4367
Reporter vector primer 4 binding region	4434–4453
Replication origin	4691
Synthetic beta-lactamase (Amp <sup>r</sup> ) coding region	5482–6342
Synthetic poly(A) signal/transcriptional pause region	6447–6600
Reporter vector primer 3 binding region	6549–6568



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