

## Product Contents

### pGL4.15[*luc2P*/Hygro] Vector:

Part No.                      Size  
E670A                         20µg

Part# 9PIE670  
Revised 2/09



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

**Description:** The pGL4.15[*luc2P*/Hygro] Vector<sup>(a-d)</sup> 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 hygromycin resistance in which the number of transcription factor binding sites has been reduced and mammalian codon usage optimized. The pGL4 Vectors are engineered with fewer consensus regulatory sequences than the pGL3 Vectors and a synthetic reporter gene that has been codon optimized for mammalian expression.

The pGL4.15[*luc2P*/Hygro] Vector is a basic vector with no promoter. However, it contains a multiple cloning region to allow 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 a greater magnitude to changes in transcriptional activity than the *luc2* gene, its more stable counterpart.

**Concentration:** 1µg/µl.

**GenBank® Accession Number:** AY864929.

**Storage Buffer:** The pGL4.15[*luc2P*/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 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.



**Promega**

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## Quality Control Assays

**Nuclease Assay:** Following incubation of 1µg of pGL4.15[*luc2P*/Hygro] 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 pGL4.15[*luc2P*/Hygro] Vector has been completely sequenced and has 100% identity with the published sequence, available at: [www.promega.com/vectors](http://www.promega.com/vectors)

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<sup>(b)</sup>Australian Pat. No. 2001 285278 and other patents pending.

<sup>(c)</sup>Patents Pending.

<sup>(d)</sup>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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All specifications are subject to change without prior notice.

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### pGL4.15[*luc2P*/Hygro] Vector Features List and Maps

Multiple cloning region	1–70
<i>luc2P</i> reporter gene	100–1875
SV40 late poly(A) signal	1915–2136
SV40 early enhancer/promoter	2184–2602
Synthetic hygromycin (Hyg <sup>r</sup> ) coding region	2627–3664
Synthetic poly(A) signal	3688–3736
Reporter Vector primer 4 (RVprimer4) binding region	3803–3822
<i>ColE1</i> -derived plasmid replication origin	4060
Synthetic β-lactamase (Amp <sup>r</sup> ) coding region	4851–5711
Synthetic poly(A) signal/transcriptional pause site	5816–5969
Reporter Vector primer 3 (RVprimer3) binding region	5918–5937

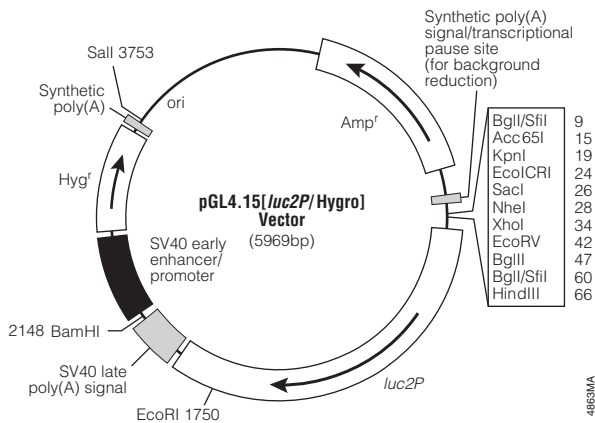


Figure 1. pGL4.15[*luc2P*/Hygro] Vector map.

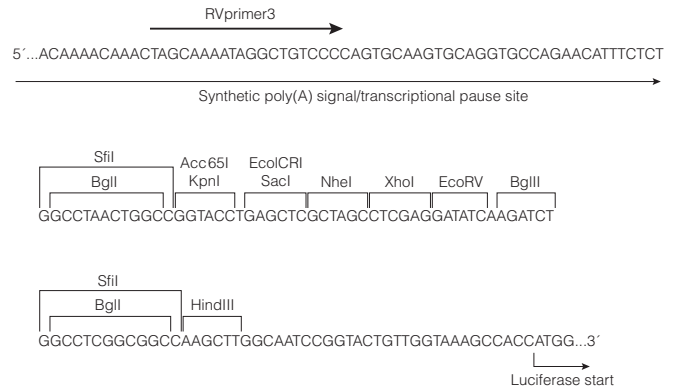


Figure 2. Multiple cloning region of the pGL4.15[*luc2P*/Hygro] Vector.

Sequence information and restriction enzyme tables for the pGL4 Vectors are available online at: [www.promega.com/vectors](http://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/tbs](http://www.promega.com/tbs)