Certificate of Analysis

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

Part No.	Size
E670A	20µg

Part# 9PIE670
Revised 10/16

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 pGL4.15[*luc2P*/Hygro] Vector[a–d] 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 is codon-optimized for mammalian expression.

The pGL4.15[*luc2P*/Hygro] Vector is a basic vector with no promoter. However, the vector 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.

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/**

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]BY USE OF THIS PRODUCT, RESEARCHER AGREES TO BE BOUND BY THE TERMS OF THIS LIMITED USE LABEL LICENSE.

Researchers shall have no right to modify or otherwise create variations of the nucleotide sequence of the luciferase gene except that researchers may (1) create fused gene sequences, and (2) insert and remove nucleic acid sequences in splicing research. No other use or transfer of this product or derivatives is authorized. Researchers must either (1) use luminescent assay reagents purchased from Promega for all determinations of luminescence activity of this product and its derivatives; or (2) contact Promega to obtain a license for use of the product. For any uses outside this label license, contact Promega for supply and licensing information. This product is for research use only; no commercial use is allowed. For a full copy of this label license, including the definition of "commercial use," go to: **www.promega.com/LULL**

[b]Patent Pending.

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

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

Signed by:

R. Wheeler, Quality Assurance

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pGL4.15[*luc2P*/Hygro] 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 hygromycin (Hyg^r) coding region	2627–3664
Synthetic poly(A) signal	3688–3736
Reporter Vector primer 4 (RVprimer4) binding region	3803–3822
*Col*E1-derived plasmid replication origin	4060
Synthetic β-lactamase (Amp^r) 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.

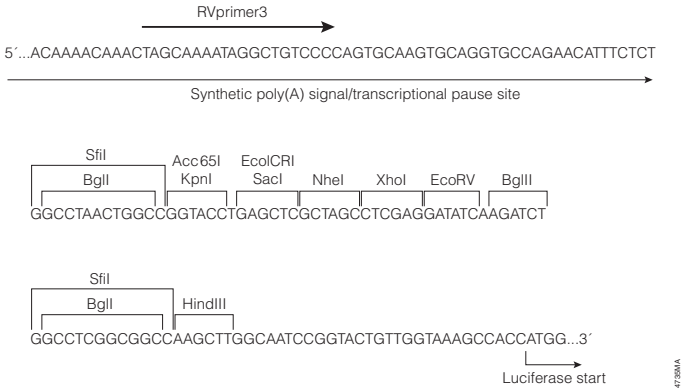

Figure 2. Multiple cloning region of the pGL4.15[*luc2P*/Hygro] Vector.

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

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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