Certificate of Analysis

pGL4.71[*hRlucP*] Vector:

Part No.	Size
E689A	20µg

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

Part# 9PIE689
Revised 5/13

AF9PI E689 0513E689

Description: The pGL4.71[*hRlucP*] Vector[a-c] encodes the luciferase reporter gene *hRlucP* (*Renilla reniformis*) 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 codon optimized for mammalian expression.

The pGL4.71[*hRlucP*] Vector has no promoter. However, it contains a multiple cloning region that allows for cloning of a promoter of choice. The *hRlucP* luciferase reporter gene contains hPEST, a protein destabilization sequence. The protein encoded by *hRlucP* reponds more quickly and with greater magnitude to changes in transcriptional activity than the *hRluc* gene, its more stable counterpart.

Concentration: 1µg/µl.

Storage Buffer: The pGL4.71[*hRlucP*] 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 pGL4.71[*hRlucP*] 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: $A_{260}/A_{280} \geq 1.80$, $A_{260}/A_{250} \geq 1.05$ at pH 7.4.

Sequence: The pGL4.71[*hRlucP*] Vector has been completely sequenced and is 100% identcal to the published sequence, available at: www.promega.com/vectors

Signed by: J. Stevens

J. Stevens, Quality Assurance

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[b]Patent Pending.

[c]U.S. Pat. No. 7,906,282 and European Pat. No. 1341808.

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Printed in USA. Revised 5/13

pGL4.71 [*hRlucP*] Vector Features and Maps

The following features are present in the vector based on nucleotide sequence.

Multiple cloning region	1–70
hRlucP reporter gene	100–1158
SV40 late poly(A) signal	1198–1419
Reporter Vector primer 4 (RVprimer4) binding region	1487–1506
*Col*EI-derived plasmid replication origin	1744
Synthetic β-lactamase (Amp^r) coding region	2535–3395
Synthetic poly(A) signal/transcriptional pause site	3500–3653
Reporter Vector primer 3 (RVprimer3) binding region	3602–3621

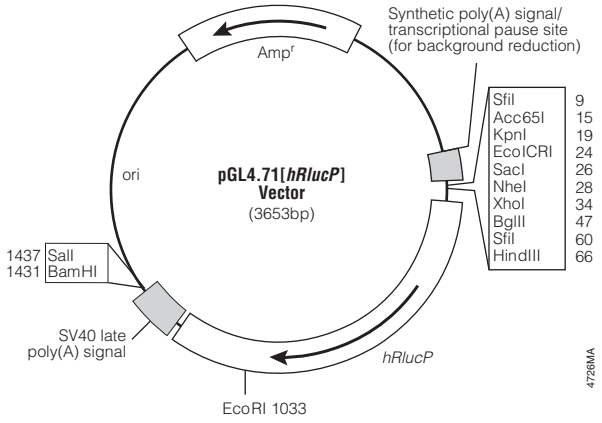

Figure 1. pGL4.71[*hRlucP*] Vector map.

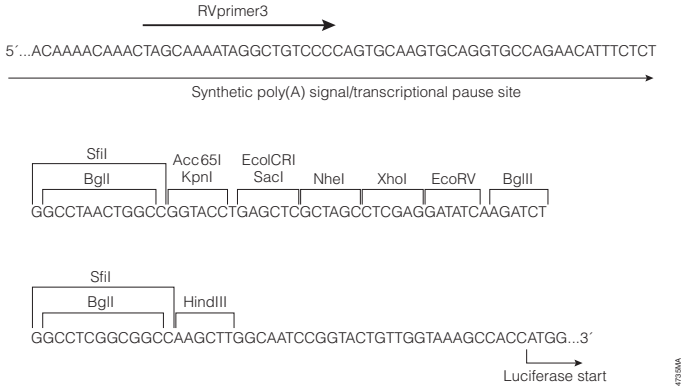

Figure 2. Multiple cloning region of the pGL4.71[*hRlucP*] Vector.

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, which is available online at: **www.promega.com/protocols**

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