## Certificate of Analysis

# pGL4.83[*hRlucP*/Puro] Vector:

| Part No. | Size |
|---|---|
| E751A | 20µg |

Part# 9PIE751
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**

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**Description:** The pGL4.83[*hRlucP*/Puro] Vector[a–d] encodes the luciferase reporter gene *hRlucP* (*Renilla reniformis*) and is designed for high expression and reduced anomalous transcription. This vector also contains a mammalian selectable marker for puromycin resistance in which the number of transcription factor binding sites has been reduced and mammalian codon usage optimized. It has also been engineered with fewer consensus regulatory sequences than the pGL3 Vectors and a synthetic reporter gene that has been codon optimized for mammalian expression.

The pGL4.83[*hRlucP*/Puro] Vector is a basic vector with no promoter. However, it contains a multiple cloning region that allows cloning of a promoter of choice. The *hRlucP* reporter gene contains hPEST, a protein destabilization sequence. The protein encoded by *hRlucP* responds more quickly and with a greater magnitude to changes in transcriptional activity than the *hRluc* gene, its more stable counterpart.

**Concentration:** 1µg/µl.

**GenBank® Accession Number:** DQ188847.

**Storage Buffer:** The pGL4.83[*hRlucP*/Puro] 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 pGL4.83[*hRlucP*/Puro] 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:** $A_{260}/A_{280}$ ≥1.80, $A_{260}/A_{250}$ ≥1.05 at pH 7.4.

**Sequence:** The pGL4.83[*hRlucP*/Puro] Vector has been completely sequenced and has 100% identity with the published sequence, available at: **www.promega.com/vectors**

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

[c]Patent Pending.

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

Signed by:

R. Wheeler, Quality Assurance


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## pGL4.83[*hRlucP*/Puro] Vector Features List and Maps

| | |
|---|---|
| Multiple cloning region | 1–70 |
| *hRlucP* reporter gene | 100–1158 |
| SV40 late poly(A) signal | 1198–1419 |
| SV40 early enhancer/promoter | 1467–1885 |
| Synthetic puromycin-N-acetyltransferase (Puro$^r$) coding region | 1910–2509 |
| Synthetic poly(A) region | 2534–2582 |
| Reporter Vector primer 4 (RVprimer4) binding region | 2649–2668 |
| *Col*EI-derived plasmid replication origin | 2906 |
| Synthetic β-lactamase (Amp$^r$) coding region | 3697–4557 |
| Synthetic poly(A) signal/transcriptional pause region | 4662–4815 |
| Reporter Vector primer 3 (RVprimer3) binding region | 4764–4783 |

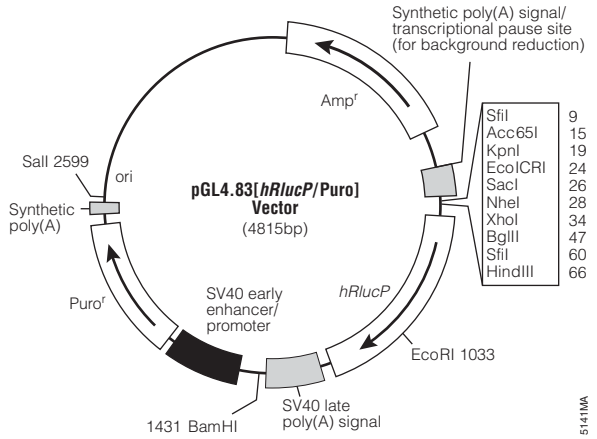


Figure 1. pGL4.83[*hRlucP*/Puro] Vector map.

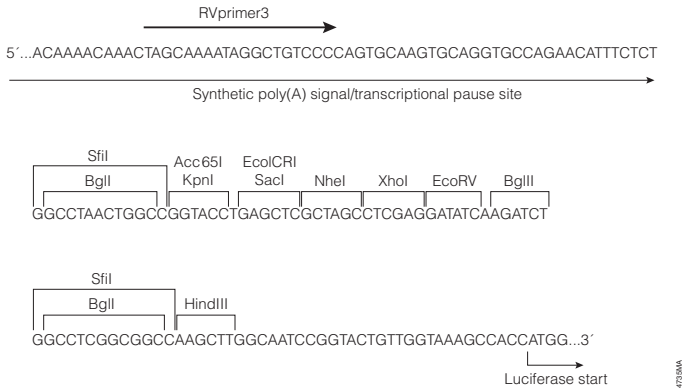


Figure 2. The multiple cloning region of the pGL4.83[*hRlucP*/Puro] Vector.

Vector sequence information, vector maps and restriction enzyme tables are available at: **www.promega.com/vectors**

For additional information see the *pGL4 Luciferase Reporter Vectors Technical Manual*, #TM259, available online: **www.promega.com/protocols**

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