

Certificate of Analysis

pGL4.78[hRlucCP/Hygro] Vector:

Part No. Size
E696A 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# 9PIE696
Revised 8/13

Description: The pGL4.78[hRlucCP/Hygro] Vector^(a-d) encodes the luciferase reporter gene *hRlucCP* (*Renilla reniformis*) 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 pGL4.78[hRlucCP/Hygro] Vector is a basic vector with no promoter. However, it contains a multiple cloning region that allows cloning of a promoter of choice. The *hRlucCP* reporter gene contains two protein destabilization sequences, hCL1 and hPEST. The protein encoded by *hRlucCP* responds more quickly and with greater magnitude to changes in transcriptional activity than the *hRluc* gene, its more stable counterpart.

Concentration: 1µg/µl.

GenBank® Accession Number: AY864933.

Storage Buffer: The pGL4.78[hRlucCP/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.



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Quality Control Assays

Nuclease Assay: Following incubation of 1µg of pGL4.78[hRlucCP/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 pGL4.78[hRlucCP/Hygro] Vector has been completely sequenced and has 100% identity with 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.

^(d)U.S. Pat. No. 7,728,118.

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pGL4.78[hRlucCP/Hygro] Vector Features List and Maps

<i>hRlucCP</i> reporter gene	100–1212
SV40 late poly(A) signal	1249–1470
SV40 early enhancer/promoter	1518–1936
Synthetic hygromycin (<i>Hyg^r</i>) coding region	1961–2998
Synthetic poly(A) signal	3022–3070
Reporter Vector primer 4 (RVprimer4) binding region	3137–3156
<i>Co/E</i> 1-derived plasmid replication origin	3394
Synthetic β -lactamase (<i>Amp^r</i>) coding region	4185–5045
Synthetic poly(A) signal/transcriptional pause site	5150–5303
Reporter Vector primer 3 (RVprimer3) binding region	5252–5271

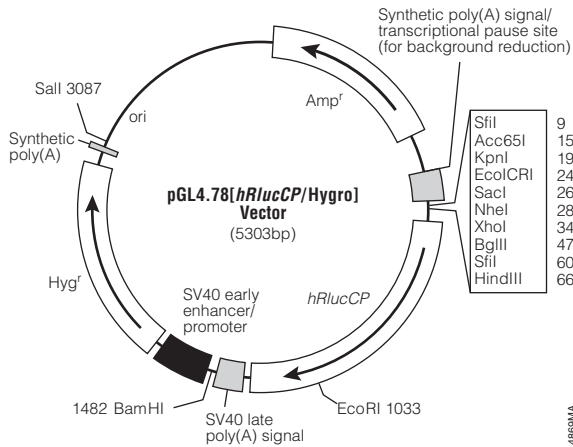


Figure 1. pGL4.78[hRlucCP/Hygro] Vector map.

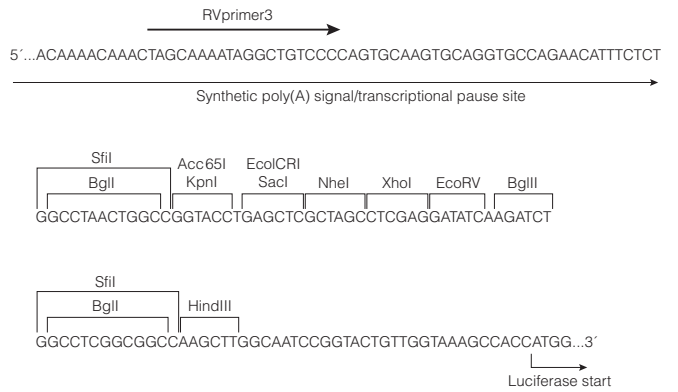


Figure 2. Multiple cloning region for the pGL4.78[hRlucCP/Hygro] Vector.