pGL4.16[luc2CP/Hygro] Vector:

Part No. E671A
Size 20µg

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/

Description: The pGL4.16[luc2CP/Hygro] Vector encodes the luciferase reporter gene luc2CP (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. This vector is also engineered with fewer consensus regulatory sequences for reduced background and a decreased risk of anomalous transcription and has a synthetic reporter gene that is codon-optimized for mammalian expression.

The pGL4.16[luc2CP/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 luc2CP reporter gene contains two protein destabilization sequences: hCL1 and hPEST. The protein encoded by luc2CP responds more quickly and with greater magnitude to changes in transcriptional activity than the luc2 gene, its more stable counterpart.

Concentration: 1µg/µl.
GenBank® Accession Number: AY964930.
Storage Buffer: The pGL4.16[luc2CP/Hygro] Vector is supplied in 10 mM Tris-HCl (pH 7.4), 1 mM EDTA.
Storage Conditions: See the product information label for storage temperature recommendations and expiration date. Avoid multiple freeze-thaw cycles and exposure to frequent temperature changes. These fluctuations can greatly alter product stability.

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 pGL4.16[luc2CP/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: A260/A280 ≥ 1.80, A260/A250 ≥ 1.05 at pH 7.4.
Sequence: The pGL4.16[luc2CP/Hygro] Vector has been completely sequenced and has 100% identity with the published sequence, available at: www.promega.com/vectors/

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pGL4.16[Luc2CP/Hygro] Vector Features List and Maps

Multiple cloning region 1–70
Luc2CP reporter gene 100–1929
SV40 late poly(A) signal 1966–2187
SV40 early enhancer/promoter 2235–2653
Synthetic hygromycin (Hygr) coding region 2678–3715
Synthetic poly(A) signal 3739–3787
Reporter Vector primer 4 (RVprimer4) binding region 3854–3873
CoEI-derived plasmid replication origin 4111
Synthetic β-lactamase (Ampr) coding region 4902–5762
Synthetic poly(A) signal/transcriptional pause site 5867–6020
Reporter Vector primer 3 binding region 5969–5988

Figure 1. pGL4.16 Vector circle map.

Figure 2. The multiple cloning region of the pGL4 Vectors.

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/