

## Certificate of Analysis

### pGL4.23[*luc2*/minP] Vector:

Part No.                      Size  
E841A                         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](http://www.promega.com/protocols)

**Description:** The pGL4.23[*luc2*/minP] Vector<sup>(a-f)</sup> encodes the luciferase reporter gene *luc2* (*Photinus pyralis*) and is designed for high expression and reduced anomalous transcription. The pGL4.23[*luc2*/minP] Vector contains a multiple cloning region for insertion of a response element of interest upstream of a minimal promoter and a *luc2* gene. *luc2* is a synthetically-derived luciferase sequence with humanized codon optimization. The vector backbone contains an ampicillin resistance gene to allow for selection in *E. coli*.

See the *pGL4 Luciferase Reporter Vectors Technical Manual #TM259* for more information.

**Concentration:** 1µg/µl.

**GenBank® Accession Number:** DQ904455.

**Storage Buffer:** The pGL4.23[*luc2*/minP] 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 Note:** 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 the vector in restriction digest buffer B at 37°C for 16 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 pGL4.23[*luc2*/minP] Vector has been completely sequenced and has 100% identity with the published sequence, available at: [www.promega.com/vectors](http://www.promega.com/vectors)

Signed by:

J. Stevens, Quality Assurance

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<sup>(b)</sup>U.S. Pat. No. 5,670,356.

<sup>(c)</sup>U.S. Pat. No. 8,008,006 and European Pat. No. 1341808.

<sup>(d)</sup>Patent Pending.

<sup>(e)</sup>U.S. Pat. No. 7,728,118.

<sup>(f)</sup>The method of recombinant expression of *Coleoptera* luciferase is covered by U.S. Pat. Nos. 5,583,024, 5,674,713 and 5,700,673. A license (from Promega for research reagent products and from The Regents of the University of California for all other fields) is needed for any commercial sale of nucleic acid contained within or derived from this product.

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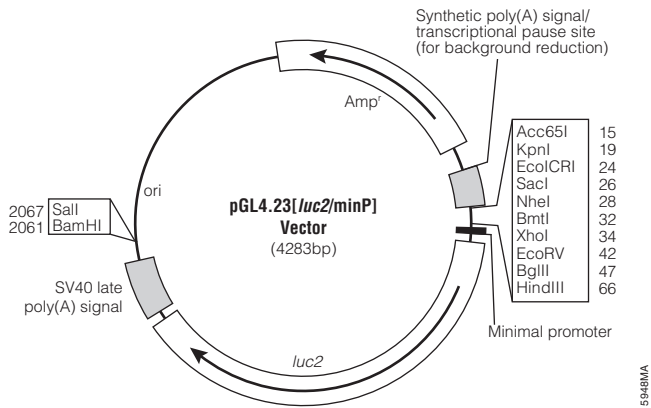
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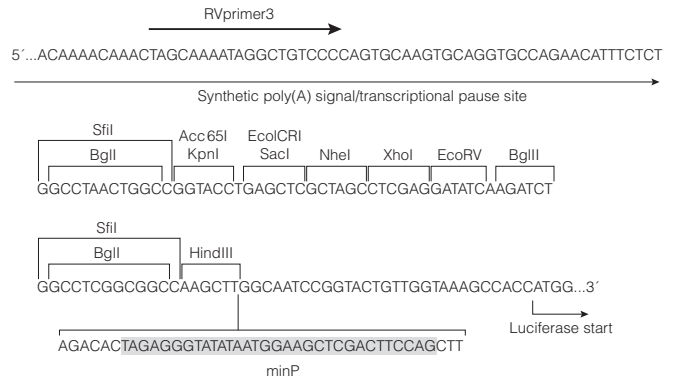
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**pGL4.23[*luc2*/minP] Vector Features List and Maps:**

Multiple cloning region	1–70
Minimal promoter	78–108
<i>luc2</i> reporter gene	141–1793
SV40 late poly(A) region	1828–2049
Reporter Vector primer 4 (RVprimer4) binding region	2117–2136
<i>CoE1</i> -derived plasmid replication origin	2374
Synthetic β-lactamase ( <i>Amp<sup>r</sup></i> ) coding region	3165–4025
Synthetic poly(A) signal/transcriptional pause signal	4130–4283
Reporter Vector primer 3 (RVprimer3) binding region	4232–4251



**Figure 1. pGL4.23[*luc2*/minP] Vector map.**



**Figure 2. Multiple cloning region for the pGL4.23[*luc2*/minP] Vector.**

Sequence information and restriction enzyme tables for the pGL4 Vectors are available online at: [www.promega.com/vectors](http://www.promega.com/vectors)

For more information see the *pGL4 Luciferase Reporter Vectors Technical Manual #TM259*, online at: [www.promega.com/protocols](http://www.promega.com/protocols)