Certificate of Analysis

pGL4.51[*luc2*/CMV/Neo] Vector:

Part No.	Size
E132A	20µg

Part# 9PIE132
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 pGL4.51[*luc2*/CMV/Neo] Vector[a,b,c] (Cat.# E1320) encodes the luciferase reporter gene *luc2* (*Photinus pyralis*), which has been codon optimized for mammalian expression. This vector is also engineered with fewer consensus regulatory sequences for reduced backgrounds and a decreased risk of anomalous transcription.

This vector contains the following features:

- *luc2* reporter gene for expression in mammalian cells
- CMV promoter for high translational expression
- SV40 late poly(A) signal sequence is positioned downstream of *luc2* to provide efficient transcription termination and mRNA polyadenylation
- Binding region for RVprimer 3 and RVprimer 4
- Synthetic poly(A) signal/transcription start site
- Synthetic Neomycin-resistance gene for mammalian cell selection of the plasmid
- Plasmid replication origin
- *Amp*^{r} gene for bacterial selection for vector amplification

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

Concentration: 1µg/µl.

GenBank® Accession Number: EU921841.

Storage Buffer: The pGL4.51[*luc2*/CMV/Neo] 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 label for expiration date.

Usage Note:

Concentration gradients may form in frozen products and should be dispersed upon thawing. Mix well prior to use.

Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711-5399 USA
Telephone 608-274-4330
Toll Free 800-356-9526
Fax 608-277-2516
Internet www.promega.com

Quality Control Assays

Contaminant Assays

Contaminating Nucleic Acids: RNA, single-stranded DNA and chromosomal DNA are not evident in a specified sample of this vector as determined by agarose gel electrophoresis.

Nuclease Assay: Following incubation of 1µg of this vector in Restriction Enzyme Buffer at 37°C for 16–24 hours, no evidence of nuclease activity is detected by agarose gel electrophoresis.

Physical Purity: $A_{260}/A_{280} \geq 1.80$; $A_{260}/A_{250} \geq 1.05$.

Functional Assays

Identity Assay: The vector has been sequenced completely and has 100% identity with the published sequence available at: www.promega.com/vectors/

Restriction Digestion: The functional purity of this vector DNA is verified by successful incubation with a variety of restriction enzymes at 37°C for one hour. Samples are examined by agarose gel electrophoresis, comparing cut and uncut vector DNA with marker DNA.

Signed by:

R. Wheeler, Quality Assurance

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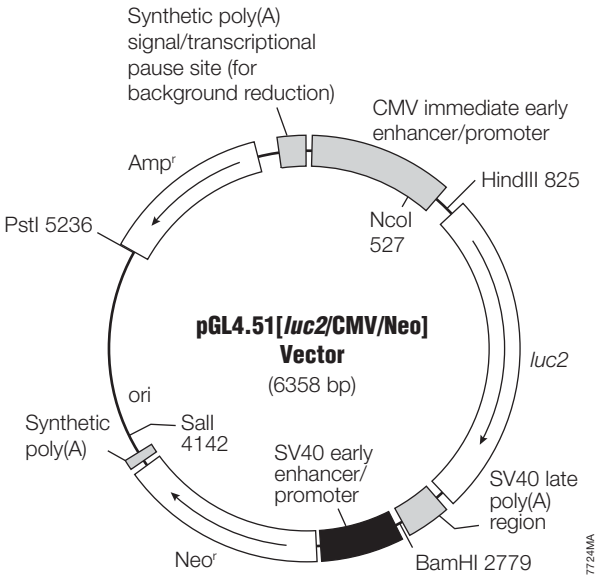
Features list and map for the pGL4.51[*luc2*/CMV/Neo] Vector

CMV immediate early enhancer/promoter	14–755
luc2	859–2511
SV40 late poly(A) region	2546–2767
SV40 early enhancer/promoter	2815–3233
Synthetic neomycin phosphotransferase coding region (Neo^r)	3258–4055
Synthetic poly(A)	4077–4125
Reporter vector primer 4 binding region	4357–4365
Replication origin	4449
Synthetic beta-lactamase (Amp^r) coding region	5240–6100
Synthetic poly(A) signal/transcriptional pause region	6205–6358
Reporter vector primer 3 binding region	6307–6326



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[b]U.S. Pat. No. 8,008,006 and European Pat. No. 1341808.

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

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