

Certificate of Analysis

pGL4.53[*luc2*/PGK] Vector:

Part No.	Size
E501A	20µg

Description: The pGL4.53[*luc2*/PGK] Vector^(a) contains the *luc2* gene encoding firefly luciferase (Fluc) from *Photinus pyralis*. The *luc2* gene is codon optimized for mammalian expression, and all pGL4 vectors are engineered with minimal consensus transcription factor-binding sites to reduce anomalous expression. Fluc is expressed from the human phosphoglycerate kinase (PGK) promoter, a nonviral, universal promoter that provides moderate levels of expression in mammalian cells. This vector can be used as a constitutive expression control or a co-reporter vector.

Concentration: 1µg/µl.

GenBank[®] Accession Number: KM359768.

Storage Buffer: The pGL4.53[*luc2*/PGK] Vector is supplied in 10mM Tris-HCl (pH 7.4), 1mM EDTA.

Storage Conditions: See the product information label for storage recommendations and expiration date.

Part# 9PIE501
Revised 10/16



AF9PIE501 1016E501

Quality Control Assays

Contaminant Assays

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

Endotoxin Concentration: Endotoxin Units (EU) are obtained using *Limulus amoebocyte* lysate testing. The specification is <100EU/mg of plasmid DNA.

Nuclease Assay: Following incubation of 1µg of the 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: $A_{260}/A_{280} \geq 1.80$, $A_{260}/A_{250} \geq 1.05$ at pH 7.4.

Functional Assays

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

Restriction Digestion: The functional purity of vector DNA is verified by successful digestion with restriction enzymes at the optimal temperature for one hour. Samples are examined by agarose gel electrophoresis to compare cut and uncut vector DNA with marker DNA.



Promega

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

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Part# 9PIE501
Printed in USA. Revised 10/16.

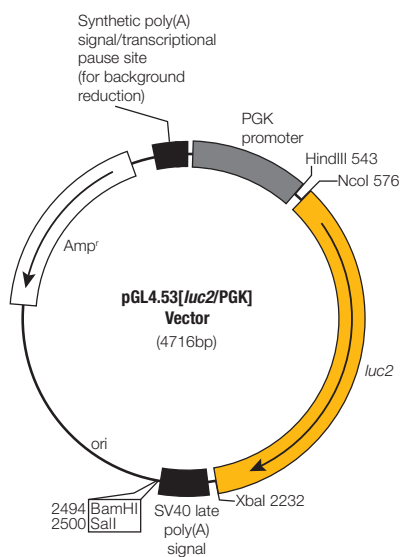
Signed by:

R. Wheeler, Quality Assurance

pGL4.53[*luc2*/PGK] Vector Features and Map

The following features are present in the vector based on nucleotide sequence.

PGK promoter	27–541
<i>luc2</i> reporter gene	577–2229
SV40 late poly(A) region	2261–2482
Reporter Vector primer 4 (RVprimer4) binding region	2550–2569
<i>Col/E1</i> -derived plasmid replication origin	2807
Synthetic β -lactamase (<i>Amp^r</i>) coding region	3598–4458
Synthetic poly(A) signal/transcriptional pause region	4563–4716
Reporter Vector primer 3 (RVprimer3) binding region	4665–4684



Sequence information and vector maps are available online at: www.promega.com/vectors

For information on the Nano-Glo® Dual-Luciferase® Assay System see Technical Manual #TM426, available online at: www.promega.com/protocols

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Printed in USA. Revised 10/16.