

Certificate of Analysis

pGL4.54[*luc2*/TK] Vector:

Part No.	Size
E506A	20µg

Description: The pGL4.54[*luc2*/TK] Vector^(®) 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 HSV-TK promoter, a viral promoter that provides low 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: KM359769.

Storage Buffer: The pGL4.54[*luc2*/TK] 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# 9PIE506
Revised 10/16



AF9PIE506 1016E506

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.



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Signed by:

R. Wheeler, Quality Assurance

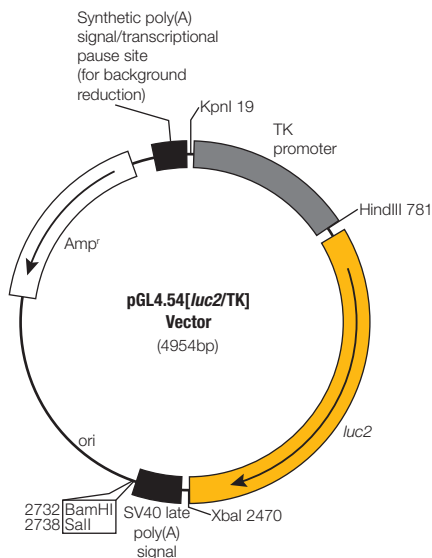
Part# 9PIE506
Printed in USA, Revised 10/16.



pGL4.54[*luc2*/TK] Vector Features and Map

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

TK promoter	27–779
<i>luc2</i> reporter gene	815–2467
SV40 late poly(A) region	2499–2720
Reporter Vector primer 4 (RVprimer4) binding region	2788–2807
<i>Col</i> /EI-derived plasmid replication origin	3045
Synthetic β -lactamase (Amp ^r) coding region	3836–4696
Synthetic poly(A) signal/transcriptional pause region	4801–4954
Reporter Vector primer 3 (RVprimer3) binding region	4903–4922



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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