

Luciferase Reporter Vector Frequently Asked Questions

Are the luciferase reporter vectors tested for endotoxin levels?	The vectors are prepared using endotoxin free DNA preparation kits, however the final vector product has not been tested for endotoxin levels.
Do the Luciferase Reporter Vectors contain a mammalian selection marker?	No, the vectors do not contain a mammalian selection marker. Rather, they contain the Ampicillin resistance gene.
Have the Luciferase Reporter Vectors been functionally validated?	Yes, the vectors have been validated. Data for each Luciferase Reporter Vector can be found on the Data/Specifications tab of the following web page: http://www.panomics.com/product.php?product_id=44 . For further details on the induction conditions used, please contact Technical Support at 877-726-6642, option 3 or techsupport@panomics.com .
How do the Luciferase Reporter Vectors work?	Each Reporter Vector contains a cis-acting DNA binding element that is recognized by a specific transcription factor (TF). Binding at this site results in the expression of firefly luciferase, an enzyme capable of catalyzing a powerful bioluminescent reaction. Light emitted from the chemical reaction is directly proportional to the amount of expressed enzyme and thus the binding activity of the targeted TF.
What are the induction conditions used for each Luciferase Reporter Vector?	Data for each Luciferase Reporter Vector can be found on the Data/Specifications tab of the following web page: http://www.panomics.com/product.php?product_id=44 . For further details on the induction conditions used, please contact Technical Support at 877-726-6642, option 3 or techsupport@panomics.com .
What comes supplied with Luciferase Reporter Vector Kits?	Each Luciferase Reporter Vector kit comes with the vector of interest, containing Transcription Factor response element insert, and the Control (TA-Luc) Vector which lacks response element insert.
What is the Empty Control Vector?	The Empty Control Vector comes with each luciferase reporter vector. The Empty Control Vector does not contain the transcription factor response element insert, it only contains the minimal TATA promoter.

<p>What is the Luciferase Reporter Vector construct?</p>	<p>The Luciferase Reporter Vectors have been specially constructed to report the binding activity of a single TF. Multiple copies of the cis-acting enhancer element have been inserted into each vector upstream of a minimal TA promoter and the TATA box from the Herpes simplex virus thymidine kinase promoter. This promoter sequence drives expression of the luciferase gene (luc). The backbone of the vector contains an ampicillin resistance gene for cloning purposes, an origin of replication, and an f1 origin for single-stranded DNA production. You can find a Vector Map on the Data/Specifications tab of the following web page: http://www.panomics.com/product.php?product_id=44. The vector sequence is also available on the Literature/Support tab of this web page.</p>
<p>What promoter is used for the Luciferase Reporter Vectors?</p>	<p>Each vector contains a minimal TA promoter, the TATA box from the Herpes simplex virus thymidine kinase promoter. Multiple copies of the cis-acting enhancer element have been inserted into each vector upstream of the minimal TA promoter.</p>
<p>What type of luciferase is present in the luciferase reporter vectors?</p>	<p>These vectors contain wild-type luciferase from <i>Photinus pyralis</i> (firefly), not engineered luciferase.</p>
<p>Where are the enhancer (cis-element sequences) inserted on the vector?</p>	<p>These enhancer elements are inserted between the NheI and BglIII restriction sites on our Translucent Control Vector. The sequence for the Translucent Control Vector can be found on the Literature/Support tab of the following web page: http://www.panomics.com/product.php?product_id=44.</p>
<p>Why are there multiple luciferase reporter vectors for the same transcription factor?</p>	<p>Each Luciferase Reporter Vector makes use of a different cis-element sequence. In addition, the number of repeats of this cis-element sequence can vary from vector to vector. For detailed information on the Luciferase Reporter Vectors, please contact Technical Support at 877-726-6642, option 3 or techsupport@panomics.com.</p>