

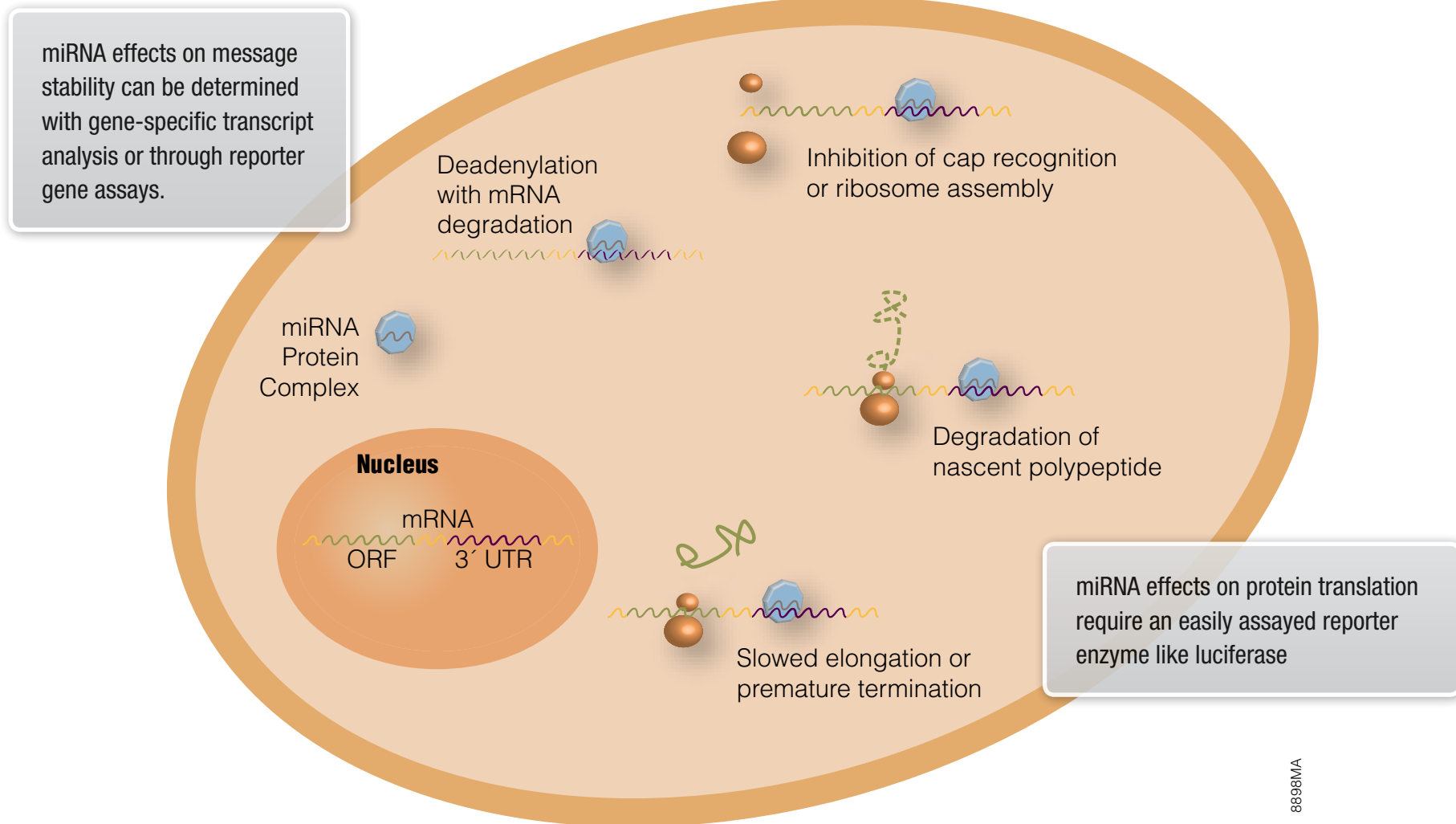
# Post-Transcriptional Control Analysis Tools

pmirGLO Dual-Luciferase miRNA Target  
Expression Vector

*Harnessing the power  
of bioluminescence to  
understand cellular physiology*

# Post-Transcriptional Control through miRNA

Possible mechanisms of miRNA-mediated post-transcriptional control



Adapted from: Chekulaeva, M. and Filipowicz, W. (2009) *Curr. Opin. Cell Biol.* **21**, 452-60.

# pmirGLO Vector simplifies analysis

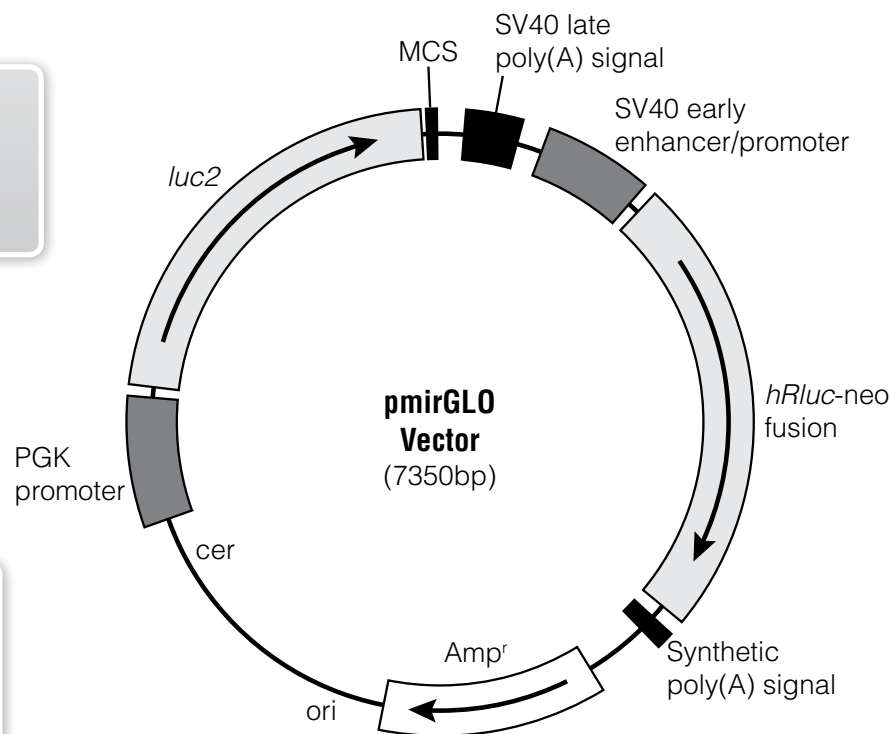
Investigate miRNA-mediated post-transcriptional control by placing 3'UTR of interest downstream of firefly luciferase



[pmirGLO Dual-Luciferase miRNA Target Expression Vector Product Information](#)

Multiple Cloning Site downstream of *luc2* for insertion of 3' UTR.

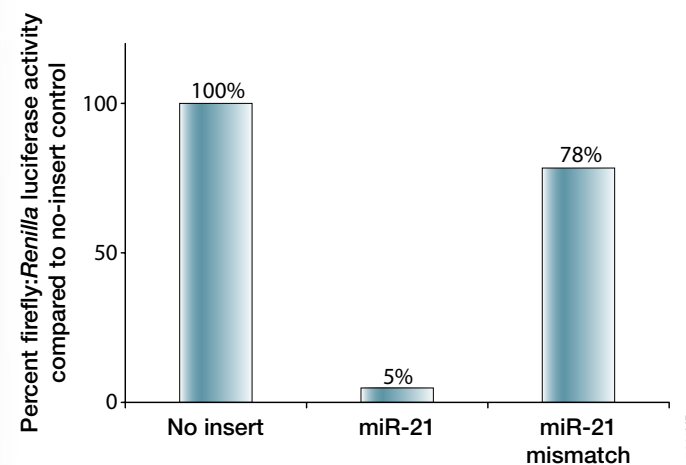
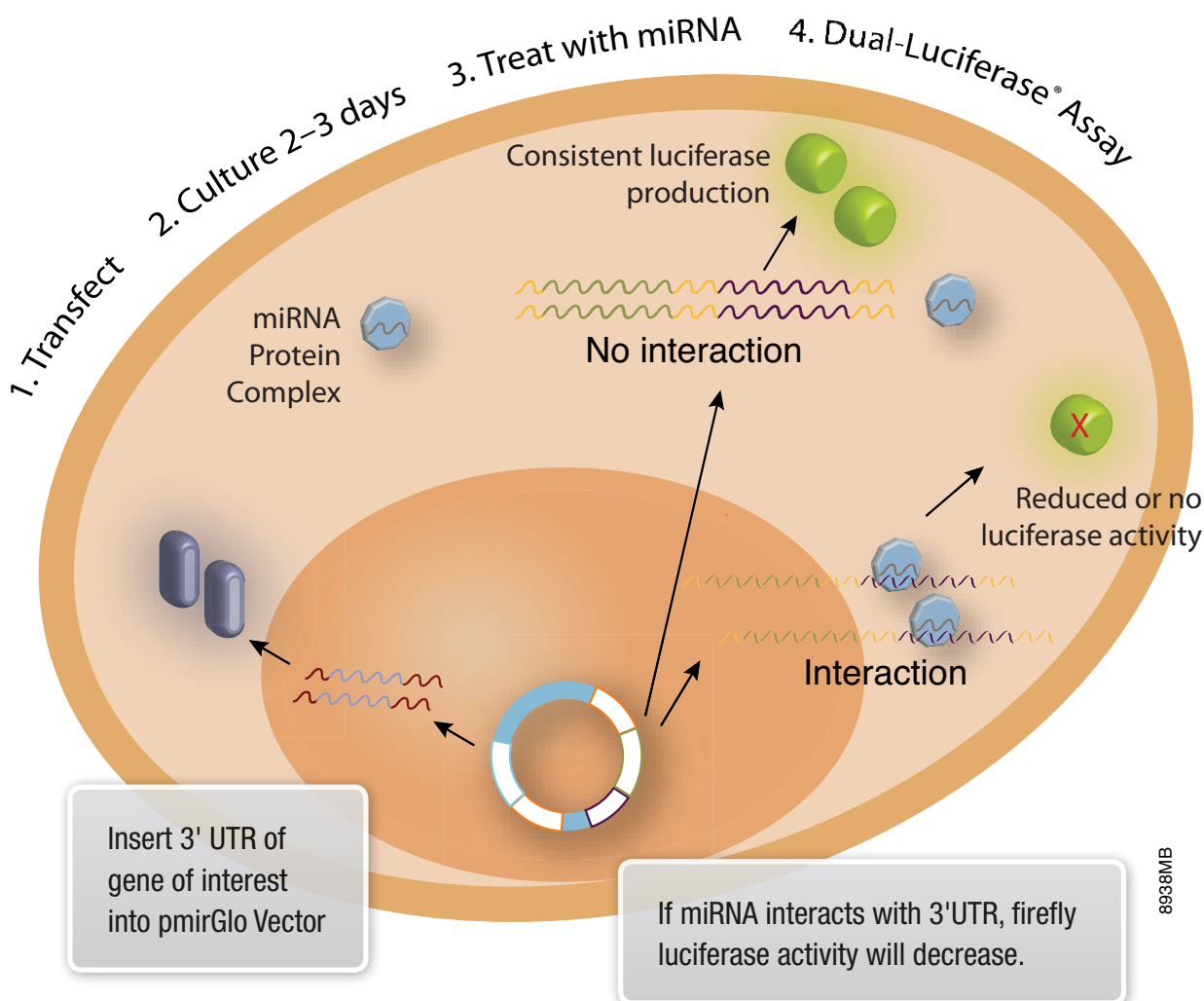
PGK non-viral promoter provides low-level *luc2* expression. Works in human, mouse, rat, yeast, etc.



*hRluc-neo* fusion provides a control reporter and the ability to produce stable transfectants.

784-1MA

# pmirGLO Assay Principle



Example with miR-21 seed sequence in pmirGLO Vector.

# Ordering Information

	MCS	Luciferase Genes	Selectable Marker	Cat. #
pmirGLO Dual-Luciferase miRNA Target Expression Vector	Y	<i>luc2P/hRluc</i>	Neomycin	E1330

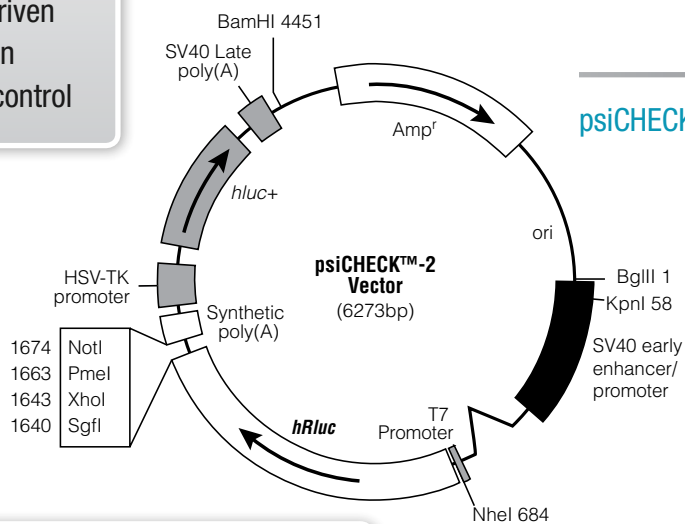
## Original transcriptional control assay vector

	MCS	Luciferase Gene	Selectable Marker	Cat. #
psiCHECK™-2 Vector	Y	<i>hRluc/luc+</i>	none	C8021

TK promoter-driven *luc+* expression serves as the control

Multiple Cloning Site downstream of *hRluc* for insertion of 3' UTR.

If miRNA is active on the cloned 3' UTR, *Renilla* luciferase activity is decreased.



4345MA10\_3A

[psiCHECK™-2 Manual](#) 

[psiCHECK™-2 Vector citations, HighWire Press®](#)

Schagat, T. and Vidugiriene, J. (2008) MicroRNA biosensors: Application for the psiCHECK™-2 Vector. *Promega Notes* **99**, 16-18. 

## Related Products

	Size	Cat. #
<b>Dual Reporter Assays (larger sizes available)</b>		
<b>Dual-Luciferase® Reporter Assay System</b>		
5 Step assay requiring lysate production. Use in multiwell plates requires dual-injectors	100 assays	E1910
<b>Dual-Glo® Luciferase Assay System</b>		
2 step assay that lyses cells directly. Use in multiwell plates does not require injectors.	10ml	E2920
<b>Rapid, Transfection-Grade Plasmid Preps</b>		
<b>PureYield™ Plasmid Miniprep System</b>	100 preps	A1223
<b>PureYield™ Plasmid Midiprep System</b>	25 preps	A2492
<b>PureYield™ Plasmid Maxiprep System</b>	10 preps	A2392
<b>Transfection Reagent</b>		
<b>FuGENE® HD Transfection Reagent*</b>	1ml	E2311
	5x1ml	E2312

Products may be covered by pending or issued patents or may have certain limitations. Please visit [www.promega.com](http://www.promega.com) for more information. The method of recombinant *Coleoptera* luciferases is covered by U.S. patent Nos. 5,583,024; 5,674,713; and 5,700,673.

\* FuGENE HD is sold only for research use at non-profit entities. See terms of use at [www.promega.com/lul](http://www.promega.com/lul)

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