Find the **NanoDLR™ Assay** format that's right for you

The Nano-Glo® Dual-Luciferase® Reporter (NanoDLR™) Assay gives you the flexibility to choose NanoLuc® luciferase, firefly luciferase, or both, as primary reporters. Use the information below to find the assay format that works best for you.

NanoLuc® Luciferase Primary Reporter

The brightest, most responsive format.

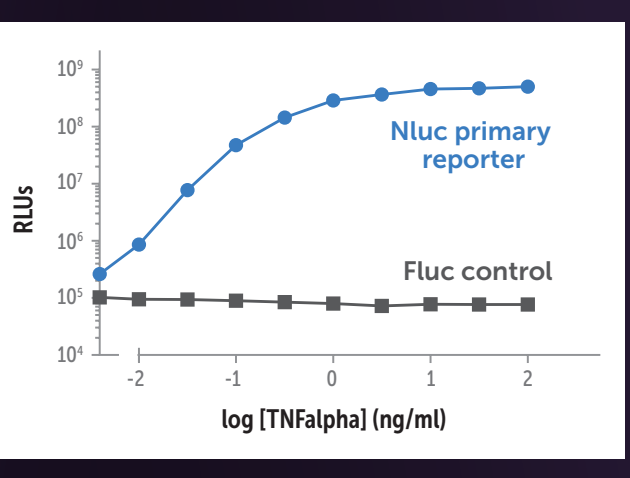
Best for:

Low cell numbers, plate scale-up or challenging cell lines.

Reporter Constructs:

NlucP Experimental Reporter »

Fluc Control »



NanoLuc® Luciferase Primary Reporter. Data shows luminescence values for HEK293 cells transfected with NFkB-NanoLuc® PEST vector and TK-Fluc control at 10:1 ratio. Cells were treated with TNFα and reporter activity measured using the NanoDLR™ assay 4 hours post-treatment.

Firefly Luciferase Primary Reporter

Use existing firefly luciferase constructs, and add NanoLuc® luciferase for a more robust control.

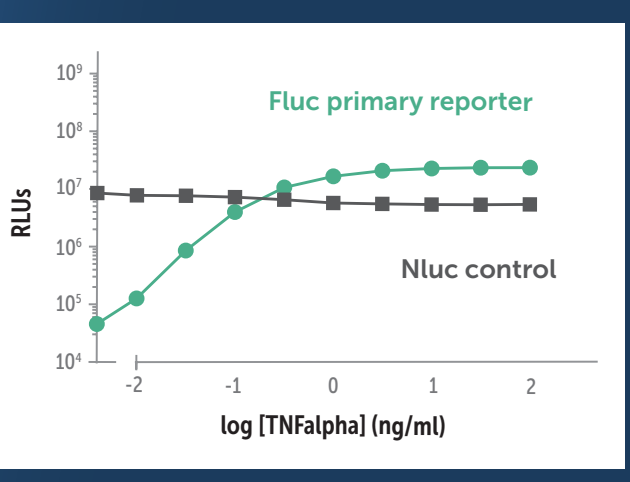
Best for:

Standard reporter assay formats. The NanoLuc® luciferase control reporter is up to 1000x brighter than *Renilla* luciferase, so you can use less control DNA.

Reporter Constructs:

FlucP Experimental Reporter »

Nluc Control »



Firefly Luciferase Primary Reporter. Data shows luminescence values for HEK293 cells transfected with NFkB response element Fluc-PEST vector and a TK-NanoLuc® control vector at 10:1 ratio. Cells were treated with TNFα and reporter activity measured using the NanoDLR™ assay 4 hours post-treatment.

Two Primary Reporters: Two Biological Responses

Measure two different biological responses simultaneously.

Best for:

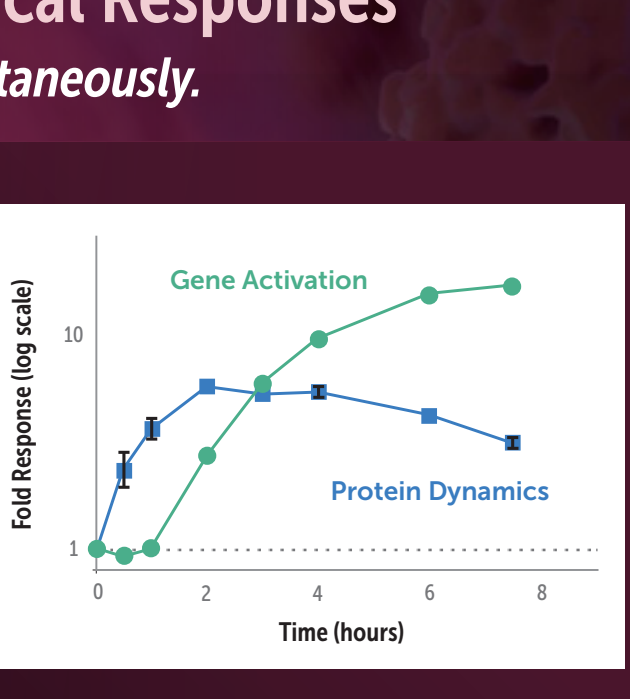
Measuring two pathways at once for maximum data; multiplexing protein stability and genetic reporter assays.[1]

Reporter Constructs:

Nluc Experimental Reporter »

FlucP Experimental Reporter »

Nluc Protein Stability Reporter »



Measure Protein Dynamics and Gene Activation in the Same Sample. HEK293 cells were transiently transfected with pNLF1-HIF1A[CMV/neo] fusion construct, diluted 1:1000 into the Hypoxia Response Element Vector, pGL4.42[luc2P/NRE/Hygro]. After 18 hours, cells were stimulated with varying doses of 1,10-phenanthroline and assayed for expression of the firefly luciferase transcriptional reporter and the HIF1a-NanoLuc® fusion protein using the Nano-Glo® Dual-Luciferase® Reporter (NanoDLR™) Assay at the indicated time points.

Two Primary Reporters: One Biological Response

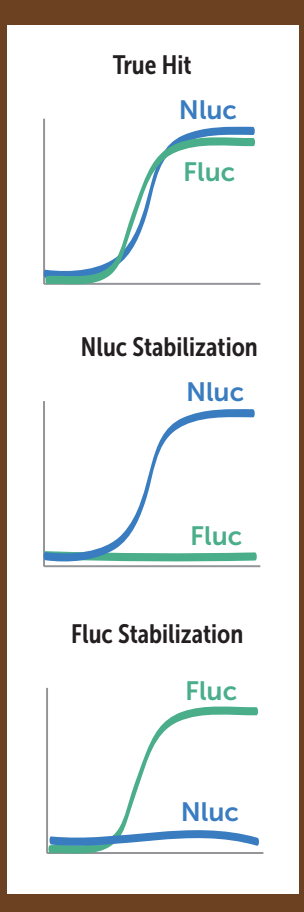
Express both reporters from a single open reading frame.

Best for:

Distinguishing false hits in HTS from compounds truly affecting expression of target gene.[2]

Reporter Construct:

Firefly-P2A-NanoLuc®-PEST Construct (**pNLCol Vectors**) »



Learn more about the NanoDLR Assay at: **www.promega.com/NanoDLRinfo**

Further Reading:

[1] **Monitoring Protein Stability**
Robers M., *et al.* (2014) Measuring Intracellular Protein Lifetime Dynamics Using NanoLuc® Luciferase. [Internet] 2/2014; tpub 139. Available from: http://www.promega.com/resources/pubhub/measuring-intracellular-protein-lifetime-dynamics-using-nanoluc-luciferase-article/

[2] **Coincidence Reporters**
Hasson, S.A. *et al.* (2015) Chemogenomic profiling of endogenous PARK2 expression using a genome-edited conincidence reporter. *ACS Chemical Biology* Epub, Feb. 26.

NanoLuc TECHNOLOGY

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