Dual-Light® Chemiluminescent Reporter Gene Assay for Firefly Luciferase and β-Galactosidase

- Detect firefly luciferase and β-galactosidase in a single sample
- Rapid combined assay format
- Achieve greater precision in normalization of transfection efficiency

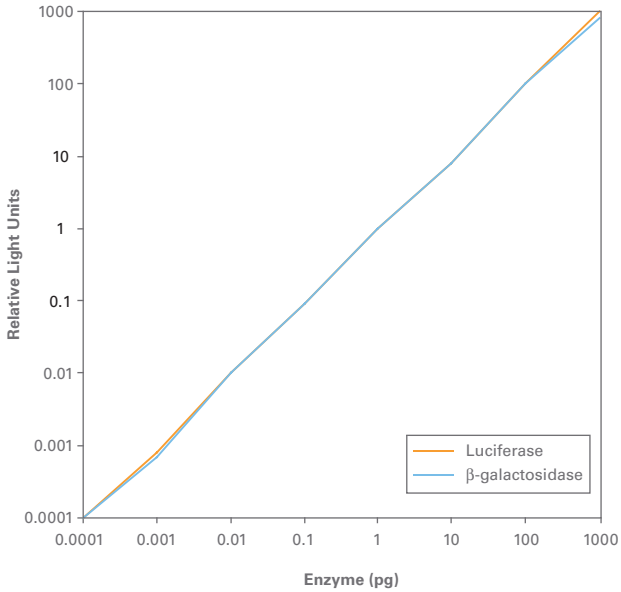

Figure 1. Detection of Firefly Luciferase and β-Galactosidase with Dual-Light® System

Application

- Reporter quantitation and transfection normalization for transiently transfected cell lines and primary cells
- Multiplex analysis of two experimental promoters
- In combination with the pMIR- REPORT™ miRNA Expression Reporter Vector System to evaluate the interaction between miRNAs and their target sites

Dual-Light® Chemiluminescent Reporter Gene Assay system provides rapid and sensitive detection of luciferase and β-galactosidase in a single sample extract. Two reporter genes—an experimental reporter (typically luciferase) and a constitutively expressed reporter used for transfection control (typically β-galactosidase)—are often used to accurately quantitate activity from experimental reporter constructs. The Dual-Light system combines both assays into one convenient simple assay using only one cell extract sample, which gives greater precision in normalization of transfection efficiency than can be achieved with two separate assays.

The assays are performed sequentially. First the luciferase is quantitated with an enhanced luciferase reaction, then β-galactosidase reporter enzyme activity is measured with Galacton-Plus® chemiluminescent β-galactosidase substrate. The light signal is measured in a luminometer. The entire assay is completed in less than one hour.

Product Configuration

Dual-Light® System Standard Size
T1003
Capacity: 200 combined assays
Contents:
- 0.2 mL Galacton-Plus® substrate
- 5 mL Buffer A*
- 22 mL Buffer B*
- 25 mL Light Emission Accelerator-II
- 70 mL Lysis Solution

Dual-Light® System Large Size
T1005
Capacity: 600 combined assays
Contents:
- 0.6 mL Galacton-Plus® substrate
- 3 x 5 mL Buffer A*
- 3 x 22 mL Buffer B*
- 75 mL Light Emission Accelerator-II
- 210 mL Lysis Solution

Dual-Light® System Screening Size
T1004
Capacity: 4,000 combined assays
Contents:
- 4 mL Galacton-Plus® substrate
- 20 x 5 mL Buffer A*
- 20 x 22 mL Buffer B*
- 500 mL Light Emission Accelerator-II
- 1.4 L Lysis Solution

*Supplied lyophilized

* Buffers A and B are supplied lyophilized

Features	Benefits
Combined assay format	Convenience Precision Speed
High sensitivity	Detect low levels of reporter enzyme produced by weak promoters or cells with low transfection efficiency
Wide dynamic range: Femtogram to nanogram	Eliminates need for multiple sample dilutions
	Enables efficient use of sample and assay reagents
Chemiluminescent assay format	High sensitivity—detect femtograms of enzyme

ORDERING INFORMATION

Package Size	P/N	Number of Combined Microplate Assays
Standard Size	T1003	400
Large Size	T1005	1200
Screening Size	T1004	10,000

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