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Firefly Luciferase Assay Kit 2.0

Highly sensitive & linear flash-type luminescence assay for measuring firefly luciferase in transfected cell reporter assays.



Product attributes

Assay type/options	Endpoint assay, Luminescence (flash-type)
Detection method/readout	Luminometer (single-tube or microplate reader with reagent injectors)
Storage Conditions	Store at -60 °C or below

Product Description

This kit is designed to measure firefly luciferase activity in transfected cell reporter assays.

Firefly luciferase is widely used as a reporter for studying gene regulation and function, and for pharmaceutical screening. It is a very sensitive genetic reporter due to the absence of endogenous luciferase activity in mammalian cells or tissues. Firefly luciferase is a 62,000 Dalton protein, which is active as a monomer and does not require subsequent processing for its activity. The enzyme catalyzes ATP-dependent D-luciferin oxidation to oxyluciferin, producing light emission. Firefly luciferase follows Michaelis-Menten kinetics and, as a result, maximum light output is not achieved until the substrate and co-factors are present in large excess. When assayed under these conditions, light emitted from the reaction is directly proportional to the number of luciferase enzyme molecules.

Note: This is a flash-type luminescence assay that requires signal to be measured immediately after adding working solution to samples. It requires a single tube luminometer or luminescence microplate reader with reagent injectors. Biotium also offers the Steady-Luc HTS Firefly Assay Kit (cat. no. 30028L), which is a homogenous glow-type assay with signal half-life of 3-5 hours.

Easy-to-Use for Consistent Results

This firefly luciferase assay kit is designed for simple and efficient quantitation of firefly luciferase reporter enzyme activity from cultured cells with high sensitivity and linearity. This kit is a new and improved replacement for the Firefly Luciferase Assay Kit (catalog no. 30003). It features Firefly Assay Buffer 2.0, which has better working solution stability compared to the original assay buffer.

Other commercial luciferase assays require you to dilute all of the firefly substrate in the assay buffer, resulting in limited shelf life after first use. In Biotium's kits, the substrates are provided as separate stock solutions that are freshly diluted for every assay, for excellent shelf life with consistent signal over time.

Assay size is based on 96-well format. The kits include enough cell lysis buffer to perform the stated number of assays in plate sizes ranging from 96-well to 24-well. Additional 5X Firefly Lysis Buffer (catalog no. 99923) can be purchased separately if needed.

Biotium also offers the Firefly & Renilla Luciferase Single Tube Assay Kit (catalog no. 30081), a combined luciferase assay kit for sequential measurement of Firefly and *Renilla* luciferase activity sequentially in the same sample with high sensitivity and linearity.

More Luciferase Kits & Related Products

Biotium Cat. No.	Product	Description	Promega Assay	Promega Cat. No.
30138	Steady-ATP™ HTS Viability Assay Kit	Highly sensitive ATP-based cell luminescent viability assay with signal half-life of 5 hours for high-throughput screening in multi-well plates.	CellTiter-Glo® Luminescent Cell Viability Assay	G7570, G7571, G7572, G7573
30085	Firefly Luciferase Assay Kit 2.0	Flash-type firefly luciferase assay kit.	Firefly Luciferase Assay System	E1483, E1500, E1501, E4030, E4530, E4550
30075	Firefly Luciferase Assay Kit (Lyophilized)	Firefly luciferase assay kit with lyophilized assay buffer for economical room temperature shipping and convenient storage at -20°C.		
30028	Steady-Luc™ Firefly HTS Assay Kit	Glow-type firefly luciferase assay with signal half-life of about 3 hours for high-throughput screening in multi-well plates.	Steady-Glo® Assay System	E2510, E2520, E2550
30028L	Steady-Luc Firefly HTS Assay Kit (Lyophilized)	Steady-Luc kit with lyophilized assay buffer for economical room temperature shipping and convenient storage at -20°C.		
30082	Renilla Luciferase Assay Kit 2.0	Flash-type Renilla luciferase assay kit.	*Renilla* Luciferase Assay System	E2810, E2820
30081	Firefly and Renilla Luciferase Single Tube Assay Kit	Assay kit for measuring firefly and Renilla activities sequentially in the same sample in a single tube.	Dual-Luciferase® Assay System (Firefly & *Renilla*)	E1910, E1960, E1980

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