# Firefly & Renilla Luciferase Single Tube Assay Kit

This kit is designed for sequential measurement of Firefly and *Renilla* luciferase activities in transfected cell reporter assays.



### Product attributes

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| **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 and *Renilla* luciferase activities 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. *Renilla* luciferase has been used as a reporter gene for studying gene regulation and function in vitro and in vivo. It commonly is used in multiplex transcriptional reporter assays or as a normalizing transfection control for firefly luciferase assays.

### Simple, Sequential Luciferase Measurement

The Firefly & *Renilla* Luciferase Single Tube Assay is a combined luciferase assay allowing sequential measurement of Firefly and *Renilla* luciferase activity in the same sample with high sensitivity and linearity. Firefly luciferase activity is measured first, then Renilla Luciferase Assay Buffer 2.0 is added to the sample to simultaneously quench firefly luciferase activity and measure *Renilla* luciferase activity. The *Renilla* Luciferase Assay Buffer 2.0 quenches the firefly luciferase activity to the level of untransfected cells, allowing sequential measurement of firefly and *Renilla* luciferase activity in the same sample.

**Note:** This is a flash-type assay that requires luminescence to be measured immediately after adding luciferase detection reagents to your sample. It requires a single-tube luminometer or luminescence microplate reader with reagent injectors.

### Easy-to-Use for Consistent Results

This kit is a new and improved replacement for the Firefly & *Renilla* Dual Luciferase Assay Kit (catalog no. 30005). 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 firefly and *Renilla* substrates are provided as separate stock solutions that are freshly diluted for every assay, for excellent shelf life with consistent signal over time. The kit features our Aquaphile™ coelenterazine, a water soluble substrate that can be stored at -20 °C with minimal evaporation, unlike methanol solutions of coelenterazine.

The kits include 1X Passive Lysis Buffer 2.0, which is ready-to-use without dilution for cell lysis. The buffer also can be used to dilute recombinant firefly or *Renilla* luciferase enzymes without the need for additional enzyme stabilizers like BSA.

The stated number of assays is based on 96-well plate format. The kits include enough 1X Passive Lysis Buffer 2.0 to perform the stated number of assays in plate sizes ranging from 96-well to 24-well. If needed, additional 1X Passive Lysis Buffer 2.0 (catalog no. 99821) can be purchased separately.

## 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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