

Firefly Luciferase Assay Kit



Ordering info:

Cat No.	Size
CA130	100 assays
CA135	1,000 assays

Includes for 100 assays:

- 10 mL Luciferase Assay Substrate
- 4 mL Cell Lysis Buffer (5x)
- 10 μg Luciferase (control)



Related Products:

- pOnebyOne™ Mammalian expression vectors (p.22)
- Custom solutions (p.147)
- FastCONTROL™ Dual Reporter Plasmid (p.28)

Description:

Luciferase from the firefly (*Photinus pyralis*) is an accurate, sensitive and easy **Luciferase Assay Kit** for studying gene reporter regulation and function in transformed cell lines in culture.

Firefly luciferase has an apparent molecular weight of 62 kDa, which is active as a monomer and does not require subsequent processing for its activity. The enzyme catalyzes the oxidation of reduced luciferin in the presence of ATP-Mg²⁺ and oxygen to generate CO₂, AMP, PPI, oxyluciferin and produces a flash of light that is proportional to the quantity of luciferase in the reaction mixture.

The Luciferase Assay Substrate includes coenzyme A, ATP and luciferin. Including coenzyme A in the reaction enhances the sensitivity of the assay and provides a sustained light reaction (half-life >5 minutes). This eliminates the need for automated luminometer injection of substrate and allows analysis by photographic film or scintillation counting.

Advantages & Features:

- ✓ **Easy and Fast protocol:** results within 14 minutes.
- ✓ **Sensitive and linear:** correlation between luciferase gene expression and light output for transfection.
- ✓ **Accurate.**
- ✓ **Ideal for high throughput assays.**

Applications:

- ✓ Detection and quantification of Firefly Luciferase.

Stress oxidative Assay Kits

SOD Assay Kit



Ordering info:

Cat No.	Size
CA061	100 assays

Includes for 100 assays:

- 1 mL WST-1 Reagent
- 20 mL SOD Assay Buffer
- 10 mL SOD Dilution Buffer
- 20 μL SOD Enzyme solution
- 50 μL SOD Standard (50 U/μL)



Related Products:

- PBS (p.133)
- Custom solutions (p.147)

Description:

Superoxide dismutases (SOD) catalyse the breakdown of superoxide radicals and provide the first line of defense against oxygen toxicity.

SOD Assay Kit, superoxide ions are generated from the conversion of xanthine and O₂ to uric acid and H₂O₂ by Xanthine Oxidase (XO). The superoxide anion then converts the tetrazolium salt WST-1 to the colored product WST-1 formazan.

Absorbance is then measured at 450 nm using a standard microplate reader. Addition of SOD to this reaction reduces superoxide ion levels, thereby lowering the rate of WST-1 formazan formation. SOD activity in the experimental sample is measured as the percent inhibition of the rate of WST-1 formazan formation.

Advantages & Features:

- ✓ **Easy-to-use.**
- ✓ **Fast protocol.**

Applications:

- ✓ Quantitative determination of superoxide dismutase (SOD) enzyme activity.

