

Firefly Luciferase

Product Description

Name :	Firefly Luciferase, recombinant
Catalog Number :	FP-D1826B 1 ml, liquid form (1mg/mL)
CAS Nulber :	61970-00-1
Molecular Weight :	MW= 120 kDa
Mesuring Range:	≤1 femtomole ATP sensitivity, (using 0.2 µg of luciferase and suitably sensitive liquid scintillation counters or luminometers)

Storage: -20°C Protect from light and moisture.
 Expiration date is one (1) year from the date of receipt.

Introduction

This recombinant firefly luciferase is an enzyme expressed from a cloned gene from the North American firefly (*Photinus pyralis*) that provides the reliability and dependability needed for performing research or producing kits using bioluminescence reagents to detect ATP or luciferin substrates. This recombinant enzyme can potentially eliminate the possibility of seasonal and regional variability that may be found in luciferase purified from natural sources.

The reaction of this enzyme with luciferin, ATP, and O₂ results in the emission of light. Luciferase can be used to detect trace amounts of ATP. Firefly luciferase is also one of the most commonly utilized reporter genes for the study of gene expression. The bioluminescent reaction catalyzed by luciferase is one of the most sensitive analytical tools for measuring gene expression. Less than or equal to one femtomole of ATP can be detected using 0.2 µg of luciferase.

Directions for use

Guidelines for use

Protocol may be found in the literature.

References

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14. **Schipper ML**, *et al.* Evaluation of firefly luciferase bioluminescence mediated photodynamic toxicity in cancer cells. *Mol Imaging Biol*, 8, 218 (2006)
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18. **Fraga H**, *et al.* Firefly luciferase produces hydrogen peroxide as a coproduct in dehydroluciferyl adenylate formation. *Chembiochem*, 7, 929 (2006)

Technical and scientific information

Related / associated products and documents

See [BioSciences Innovations catalogue](#) and [e-search tool](#).

- Firefly Luciferase 1-Step Assay Kit, [FP-BX0320](#)
- Firefly and Renilla Luciferase Assay Kit, [FP-BE7810](#)
- D-Luciferin, K+ salt, [FP-M1224A](#)

Ordering information

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