Luciferase *Recombinant firefly*

Ordering Information:	*Storage Conditions:*
Product Number: 12500 (1mg/1mL)	Keep at -20 °C. Expiration date is one year from the date of receipt.

General Properties

CAS Number: 61970-00-1
Molecular Weight: ~60 kDa
Form: liquid (1mg/mL)
Measuring Range: ≤1 femtomole ATP sensitivity (using 0.2 µg of luciferase and suitably sensitive liquid scintillation counters or luminometers)

Biological Applications

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 O_2 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 by using 0.2 µg of luciferase.

References

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