Creative Enzymes®

# Biotinylated Luciferase from E. coli, Recombinant

*Cat. No. NATE-1254*

*Lot. No.* (See product label)

## Introduction

***Description*** Luciferase is an enzyme that catalyzes production of light from luciferin in the presence of Mg2+-ATP and oxygen. The reaction of this enzyme with luciferin, ATP, and O2 results in the emission of light. Luciferase activity can be inhibited by general anesthetics including isoflurane and ketamine/medetomidine thereby affecting the sensitivity of bioluminescence imaging.

***Synonyms*** Photinus-luciferin 4-monooxygenase (ATP-hydrolysing); firefly luciferase; luciferase (firefly luciferin); Photinus luciferin 4-monooxygenase (adenosine triphosphate-hydrolyzing); firefly luciferin luciferase; Photinus pyralis luciferase; EC 1.13.12.7; 61970-00-1

## Product Information

| | |
|---|---|
| ***Species*** | E. coli |
| ***Source*** | E. coli |
| ***Appearance*** | Liquid form |
| ***EC Number*** | EC 1.13.12.7 |
| ***Molecular Weight*** | ca. 70 kDa |
| ***Activity*** | > 1.0 x 10^10 relative light units (RLU)/ml Specific activity: 1.9 x 10^11 RLU/mg purified protein |
| ***pH Stability*** | 5.5–9.0 |
| ***Optimum pH*** | 7.5–8.5 |
| ***Thermal stability*** | below ca. 45°C |
| ***Michaelis Constant*** | 1.7 x 10^-4 M (ATP) 1.3 x 10^-4 M (D-luciferin) |
| ***Structure*** | monomer of ca. 70 kDa (SDS-PAGE) |
| ***Unit Definition*** | One relative light unit (RLU) is defined as the amount of enzyme which emits 1 count of light for 20 s at 30°C and pH 7.8. |

## Storage and Shipping Information

| | |
|---|---|
| ***Storage*** | at -20°C |
| ***Stability*** | stable at 25°C for at least one week (liquid form) |