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)