

## 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  $Mg^{2+}$ -ATP and oxygen. The reaction of this enzyme with luciferin, ATP, and  $O_2$  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

<b>Species</b>	E. coli
<b>Source</b>	E. coli
<b>Appearance</b>	Liquid form
<b>EC Number</b>	EC 1.13.12.7
<b>Molecular Weight</b>	ca. 70 kDa
<b>Activity</b>	$> 1.0 \times 10^{10}$ relative light units (RLU)/ml Specific activity: $1.9 \times 10^{11}$ RLU/mg purified protein
<b>pH Stability</b>	5.5–9.0
<b>Optimum pH</b>	7.5–8.5
<b>Thermal stability</b>	below ca. 45°C
<b>Michaelis Constant</b>	$1.7 \times 10^{-4}$ M (ATP) $1.3 \times 10^{-4}$ M (D-luciferin)
<b>Structure</b>	monomer of ca. 70 kDa (SDS-PAGE)
<b>Unit Definition</b>	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

<b>Storage</b>	at -20°C
<b>Stability</b>	stable at 25°C for at least one week (liquid form)