Creative Enzymes®

D(-)-Luciferin

Cat. No. CSUB-0354

Lot. No. (See product label)

Introduction

Applications	Substrate for firefly luciferase with a Km of approx 2 μM.Used for the luminometric determination of Luc activity in cell extracts. Natural substrate of luciferase from firefly. Used together with firefly luciferase for the determination of ATP using bioluminescence.
Synonyms	(S)-2-(6-Hydroxy-2-benzothiazolyl)-2-thiazoline-4-carboxylic acid; 4, 5-Dihydro-2-(6-hydroxy-2-benzothiazolyl)-4-thiazolecarboxylic acid; D-Luciferin; Firefly Luciferin

Product Information

CAS No.	2591-17-5
Molecular Formula	C11H8N2O3S2
Molecular Weight	280.32
Substrates	Luciferase

Usage and Packaging

Preparation Instructions	Working concentration: For the assay of medium concentrations of ATP (10-9 to 10-6 M in the assay cuvette), use 35 to 70 μM D(-)-Luciferin. For the assay of low concentrations of ATP (10-13 to 10-8 M in the assay cuvette), use 350 μM D(-)-Luciferin. For the assay of metabolites convertible to ATP or enzymes which produce ATP, the literature suggests concentrations of D(-)-Luciferin from 35-359 μM.Working solution: Preparation of D(-)-Luciferin solutionTo minimize handling of the unstable compound, prepare a D(-)-Luciferin solution at the approximate concentration desired, then adjust it to the exact concentration on the basis of absorbance at 327 nm. (The absorptivity of D(-)-Luciferin at 327 nm is 18.2 mmol-1 x l x cm-1).For instance, to prepare a 700 M solution of D()-Luciferin:• Add 1.5 mg of D(-)-Luciferin to 5 ml of 70 mM Tris-acetate, pH 7.75 [theoretical concentration = 1.07 mM]• Dilute a portion of that stock solution 20-fold with buffer.• Read the absorbance at 327 nm.• Add buffer to the stock so that a 20-fold dilution gives A327 of 0.637 (concentration of 20-fold dilution = 35 μM; concentration of stock = 700 μM)

Storage and Shipping Information

Storage	-20°C
Shipping Conditions	dry ice