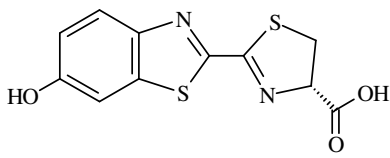


Instruction Manual

Catalog Number	PK-CA707-10100-2
Description	D-Luciferin is a natural compound isolated from fireflies and is a substrate for the enzyme luciferase. Chemiluminescence at 560 nm is generated when luciferin is oxidized by an ATP-dependent process, catalyzed by luciferase. Luciferase is encoded by the luc gene, which is widely used as a reporter gene in a variety of cells. Because of the intrinsic low background of chemiluminescence technique, detection of the luc gene expression can be made at very low level. In addition, luciferin/luciferase has been used to measure 10^{-15} molar quantity of ATP.
Quantity	1 g
Excitation / Emission Maxima	NA
Molecular Structure	 <p>The chemical structure shows a benzothiazole ring system with a hydroxyl group at the 6-position, connected to a thiazolidine ring with a carboxylic acid group at the 4-position.</p>
Molecular Weight / Molecular Formula	280.0 Da; $C_{11}H_8N_2O_3S_2$
Purity	$\geq 99\%$ by HPLC
Appearance / Formulation / Solubility	White solid; soluble in DMSO and slightly soluble in water. Avoid alkaline or strongly acidic solution.
Storage & Stability	Store at -20°C . Protect from light.
Applications	Luciferase assays (e.g. with the Firefly luciferase reporter gene)
References	BioTechniques 7, 1116(1989) Lett. Appl. Microbiol. 1, 208(1990)
Caution	Potentially harmful. Avoid prolonged or repeated exposure. Avoid getting in eyes, on skin, or on clothing. Wash thoroughly after handling. If eye or skin contact occurs, wash affected areas with plenty of water for 15 minutes and seek medical advice. In case of inhaling or swallowing, move individual to fresh air and seek medical advice immediately.

FOR IN VITRO RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC PROCEDURES.