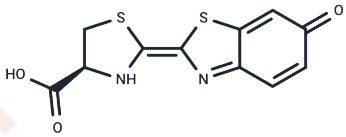
Data Sheet (Cat.No.T3313)

TargetMol

D-Luciferin

Chemical Properties



CAS No. : 2591-17-5

Formula: C11H8N2O3S2

Molecular Weight: 280.32

Storage: Keep away from direct sunlight,Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	D-Luciferin (D-(-)-Luciferin) is a luciferase (Luc) substrate that catalyzes the production of typical yellow-green light (560 nm) by bioluminescent insects. D-Luciferin can be used in luciferase assays.
Targets(IC50)	Others
In vitro	D-luciferin reacts with luciferase, ATP and oxygen with light emission, and the light is detected by a sensitive photographic film, thereby permitting the visualization of the alkaline phosphatase-conjugated antibodies. [1]
In vivo	In an immunocompetent mouse model of ovarian cancer, use of D-luciferin substrate and firefly luciferase preserves tumor-host immune interactions, since bioluminescent imaging is a more sensitive indication of tumor growth than weight gain. [2]

Solubility Information

Solubility	Ethanol: 1 mg/mL (3.57 mM),Sonication is recommended. DMSO: 55 mg/mL (196.2 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 5.5 mg/mL (19.62 mM),Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5.5 mg/mL (19.62 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5674 mL	17.8368 mL	35.6735 mL
5 mM	0.7135 mL	3.5674 mL	7.1347 mL
10 mM	0.3567 mL	1.7837 mL	3.5674 mL
50 mM	0.0713 mL	0.3567 mL	0.7135 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Hauber R, et al. J Clin Chem Clin Biochem. 1987, 25(8), 511-514.
Liang Q, Hu Y, Yuan Q, et al.MET exon 14 skipping mutation drives cancer progression and recurrence via activation of SMAD2 signalling.British Journal of Cancer.2023: 1-14.
Liao JB, et al. J Immunother Cancer. 2015. doi: 10.1186/s40425-2015-20060-6.
Yao H, Huang C, Zou J, et al.Extracellular vesicle-packaged lncRNA from cancer-associated fibroblasts promotes immune evasion by downregulating HLA-A in pancreatic cancer.Journal of Extracellular Vesicles.2024, 13(7): e12484.