Product Datasheet

Technical Data

Formula	$C_{11}H_8N_2O_3S_2$					
Molecular Weight	280.32	**CAS No.**	2591-17-5			
Solubility (25°C)*	In vitro	DMSO	28 mg/mL (99.88 mM)			
		Water	Insoluble			
		Ethanol	Insoluble			
	In vivo (Add solvents to the product individually and in order)	Oral Administration	Homogeneous suspension	CMC-NA	≥5mg/ml	Taking the 1 mL working solution as an example, add 5 mg of this product to 1 ml of CMC-Na solution, mix evenly to obtain a homogeneous suspension with a final concentration of 5 mg/ml.

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Concentration \ Volume / Mass	1 mg	5 mg	10 mg
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

Biological Activity

Description	D-Luciferin is a popular bioluminescent substrate of luciferase in the presence of ATP, used in luciferase-based bioluminescence imaging and cell-based high-throughput screening applications. In an immunocompetent mouse model of ovarian cancer, the use of this compound and firefly luciferase preserves tumour-host immune interactions since bioluminescent imaging is a more sensitive indication of tumour growth than weight gain.
In vitro	1.Example protocol for in vitro bioluminescent image assays a) Prepare a 100 mM (100-200X) Luciferin stock solution in sterile water. Mix well. Use immediately, or make single use aliquots, and store at -20℃, avoid freeze-thaw cycles, avoid exposure to the light. b) Prepare a 0.5-1 mM working solution of D-Luciferin in pre-warmed tissue culture medium. c) Aspirate media from cultured cells. d) Add this compound working solution to cells, and incubate the cells for 5-10 minutes at 37℃ just prior to imaging. 2.Example protocol for in vivo bioluminescent image assays a) Prepare a 15 mg/mL Luciferin stock solution in DPBS, without Mg2+ and Ca2+. Mix well. b) Filter sterilizes the solution through a 0.2 μm filter. Use immediately, or make single use aliquots, and store at -20℃, avoid freeze-thaw cycles, avoid exposure to the light. c) Inject the luciferin intra-peritoneally (i.p.) 10-15 minutes before imaging at 150 mg/kg (or 10 μL/g of this chemical stock solution) of the animal body weight. Note: A kinetic study of luciferin should be performed for each animal model to determine peak signal time. 3.Example protocol for luciferin reporter assays a) Prepare a 100 mM Luciferin stock solution in sterile water. Use immediately, or make single use aliquots, and store at -20℃, avoid freeze-thaw cycles, avoid exposure to the light. b) Prepare a 1 mM working solution of this compound with 3 mM ATP, 1 mM DTT and 15 mM MgSO4 in 25 mM tricine buffer pH 7.8. c) Pipette 5-10 μLof cell lysate into a microplate. Use lysis reagent or buffer without lysate as a blank. d) Prime luminometer with this chemical working solution. e) Inject 200 μL of this compound working solution with no delay and a 10 second integration time.
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]

Protocol (from reference)

Animal Study:[3]

- **Animal Models**
  Female BALB/c nu/nu mice
- **Dosages**
  75 mg/kg
- **Administration**
  s.c.

References

https://pubmed.ncbi.nlm.nih.gov/3694139/ https://pubmed.ncbi.nlm.nih.gov/25992288/ https://pubmed.ncbi.nlm.nih.gov/20671955/

RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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