L-Mimosine

Catalog No.C12693 Batch:C1269303

Product Datasheet

Technical Data

Formula	$C_8H_{10}N_2O_4$		
Molecular Weight	198.18	**CAS No.**	500-44-7
Solubility (25°C)*	In vitro	5%TFA	6.02 mg/mL (30.37 mM)
		DMSO	Insoluble
		Water	Insoluble

* <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

Biological Activity

Description	L-Mimosine (Leucenol) is a non-protein amino acid, and acts as an iron chelator.
In vitro	L-Mimosine arrests the cell cycle at the G1 phase in PC-3 cells and at the S phase in LNCaP cells, thus attenuating cell proliferation. [1] This compound, as a prolyl hydroxylase (PHD) inhibitor, stimulates VEGF production, and increases their proangiogenic capacity in dental pulp-derived cells. [2]
In vivo	L-Mimosine (50 mg/kg i.p.) substantially upregulates HIF-1alpha expression in the kidneys, and remarkably enhances the natriuretic response to renal perfusion pressure in Sprague-Dawley rats. [3]

Protocol (from reference)

Cell Assay:[1]

- **Cell lines**
  PC-3 and LNCaP cells
- **Concentrations**
  ~800 μM
- **Incubation Time**
  48 hours
- **Method**
  Cell proliferation in response to L-mimosine is measured using a [^{3}H]thymidine incorporation assay. In this assay, 1 × 10^4 cells are cultured in each well of a 12-well plate in RPMI-1640 medium with 10% FCS and different concentrations (0–800 μM) of this compound. After the required incubation periods (24 and 48 h), 0.5 μCi/ml of [^{3}H]thymidine is added to each well of the 12-well plate. The cells are then incubated at 37°C in a humidified 5% CO_2 atmosphere for 4 h. Cells are then washed twice with cold phosphate-buffered saline (PBS) and then with cold 5% trichloroacetic acid. Cells are lysed by adding 0.5 ml of 0.5 N NaOH. Then 400 μl of the solubilized cell solution are mixed with 4 ml of scintillation cocktail and counted in a liquid scintillation analyzer . Each sample was tested in quadruplicate.

Animal Study:[3]

- **Animal Models**
  Sprague-Dawley rats
- **Dosages**
  ~50 mg/kg
- **Administration**
  i.p.

References

https://pubmed.ncbi.nlm.nih.gov/22116304/ https://pubmed.ncbi.nlm.nih.gov/23063224/ https://pubmed.ncbi.nlm.nih.gov/16885149/

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.

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