ISX-9 (Isoxazole 9)

Catalog No.C13047 Batch:C1304703

Product Datasheet

Technical Data

Formula	$C_{11}H_{10}N_2O_2S$					
Molecular Weight	234.27	**CAS No.**	832115-62-5			
Solubility (25°C)*	In vitro	DMSO	47 mg/mL (200.62 mM)			
		Ethanol	13 mg/mL (55.49 mM)			
		Water	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.
		Injection	Clear solution	5%DMSO [1]→ 55%PEG300 [2]→ 40%ddH2O Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	10.000mg/ml (42.69mM)	Taking the 1 mL working solution as an example, add 50 μL of 200 mg/ml clarified DMSO stock solution to 550 μL of PEG 300, mix evenly to clarify it; then continue to add 400 μL of ddH2O to adjust the volume to 1 mL. The mixed solution should be used immediately for optimal results.

* <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	4.2686 mL	21.3429 mL	42.6858 mL
5 mM	0.8537 mL	4.2686 mL	8.5372 mL
10 mM	0.4269 mL	2.1343 mL	4.2686 mL
50 mM	0.0854 mL	0.4269 mL	0.8537 mL

Biological Activity

Description	Isoxazole 9 (Isx-9) is a synthetic promotor of adult neurogenesis by triggering neuronal differentiation of adult neural stem/precursor cells (NSPCs). Isoxazole 9 (Isx-9) activates multiple pathways including **TGF-β** induced epithelial–mesenchymal transition (EMT) signaling, canonical and non-canonical **Wnt** signaling at different stages of cardiac differentiation.
In vitro	Isoxazole 9 (ISX-9) increases cell number and promotes cell differentiation in NSPCs, whereas it induces cell damage in OPCs. In outgrowth EPCs, this compound decreases tube formation without effect on early EPCs. [1]
In vivo	In mice, isoxazole 9 (ISX-9) (20 mg/kg, i.p.) crosses the BBB and increases proliferation of neuroblasts and neurogenesis via Mef2-specific mechanisms in the hippocampal SGZ. This compound also increases differentiation and dendritic complexity of immature neurons and improves memory. In MWM, it improves spatial memory. [2]

Protocol (from reference)

Cell Assay:[1]

- **Cell lines**
  NSPCs, OPCs, early EPCs, and outgrowth EPCs
- **Concentrations**
  ~50 μM
- **Incubation Time**
  48 h
- **Method**
  Cells are treated with different concentrations of Isoxazole 9 (ISX-9) (0, 6.25, 12.5, 25, or 50 μM), and 2 days later, cell numbers are counted in a blinded manner to evaluate the effects of this compound on the proliferation/survival of four types of progenitor/precursor cells.

Animal Study:[2]

- **Animal Models**
  Transgenic Nkx2.5-luciferase reporter mice
- **Dosages**
  20 mg/kg
- **Administration**
  i.p.

References

https://pubmed.ncbi.nlm.nih.gov/26407349/ https://pubmed.ncbi.nlm.nih.gov/22542682/

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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