P7C3

Catalog No.C13091 Batch:C1309103

Product Datasheet

Technical Data

Formula	$C_{21}H_{18}Br_2N_2O$					
Molecular Weight	474.19	**CAS No.**	301353-96-8			
Solubility (25°C)*	In vitro	DMSO	95 mg/mL (200.34 mM)			
		Ethanol	6 mg/mL (12.65 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] → 40%PEG300 [2] → 5%Tween80 [3] → 50%ddH2O Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	4.750mg/ml (10.02mM)	Taking the 1 mL working solution as an example, add 50 μL of 95 mg/ml clarified DMSO stock solution to 400 μL of PEG300, mix evenly to clarify it; add 50 μL of Tween80 to the above system, mix evenly to clarify; then continue to add 500 μL of ddH2O to adjust the volume to 1 mL. The mixed solution should be used immediately for optimal results.
			Clear solution	5% DMSO [1] → 95% Corn oil Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	1.180mg/ml (2.49mM)	Taking the 1 mL working solution as an example, add 50 μL of 23.6 mg/ml clear DMSO stock solution to 950 μL of corn oil and mix evenly. 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	2.1089 mL	10.5443 mL	21.0886 mL
5 mM	0.4218 mL	2.1089 mL	4.2177 mL
10 mM	0.2109 mL	1.0544 mL	2.1089 mL
50 mM	0.0422 mL	0.2109 mL	0.4218 mL

Biological Activity

Description	P7C3 is a potent proneurogenic and neuroprotective chemical that targets **NAMPT** enzyme.
Targets	NAMPT [1]
In vitro	In U2OS Cells, P7C3 protects cells from doxorubicin-mediated toxicity, and enhances the flux of nicotinamide through the NAMPT-mediated salvage pathway. [1]
In vivo	In mouse brain, P7C3 (40 mg/kg, p.o.) induces neurogenesis and enhances survival of newborn neurons. In npas3$^{-/-}$ mice, this compound (20 mg/kg/d, p.o.) increases the magnitude of neural precursor cell proliferation, and corrects morphological and electrophysiological deficits. [2] In the Ts65Dn mouse model of Down Syndrome, this chemical restores hippocampal neurogenesis though a significant increase in total Ki67+, DCX+, and surviving BrdU+ cells. [3]

Protocol (from reference)

Animal Study: [2]

- **Animal Models**
  Mice
- **Dosages**
  ~40 mg/kg
- **Administration**
  p.o.; i.p.

References

https://pubmed.ncbi.nlm.nih.gov/25215490/ https://pubmed.ncbi.nlm.nih.gov/20603013/ https://pubmed.ncbi.nlm.nih.gov/25668489/

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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