BMH-21

Catalog No.C12894 Batch:C1289403

Product Datasheet

Technical Data

Formula	$C_{21}H_{20}N_4O_2$					
Molecular Weight	360.41	**CAS No.**	896705-16-1			
Solubility (25°C)*	In vitro	DMSO	6 mg/mL (16.64 mM)			
		Ethanol	2 mg/mL (5.54 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.

* <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	BMH-21 is a DNA intercalator, which binds ribosomal DNA and inhibits **RNA polymerase I (Pol I)** transcription.
Targets	RNA polymerase I [1]
In vitro	BMH-21 causes proteasome-dependent destruction of RPA194, the large catalytic subunit protein of Pol I holocomplex. [1] In U2OS cancer cell line, this compound results in degradation of RPA194 and translocation of NCL with IC50 of 0.05 μM and 0.07 μM, respectively. By causing nucleolar stress, it also shows potent inhibition on cell viability. [2]
In vivo	This compound reduces tumor growth in mouse xenografts. [1]

Protocol (from reference)

Cell Assay:[2]

- **Cell lines**
  U2OS osteosarcoma cells
- **Concentrations**
  ~5 μM
- **Incubation Time**
  48 hours
- **Method**
  The cells are maintained at 37 °C in a humidified atmosphere containing 5% CO_2. U2OS osteosarcoma cells are cultured in DMEM supplemented with 15% fetal bovine serum. Cells are plated in 96-well plates at a density of 10000 cells/well in triplicate and incubated for 48 h with the compounds. Viability is determined using WST-1 cell proliferation reagent.

Animal Study:[3]

- **Animal Models**
  Athymic NCr nu/nu mice
- **Dosages**
  25 or 50 mg/kg
- **Administration**
  i.p.

References

https://pubmed.ncbi.nlm.nih.gov/24434211/ https://pubmed.ncbi.nlm.nih.gov/24847734/ https://pubmed.ncbi.nlm.nih.gov/24434211/

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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