Product Datasheet

Technical Data

Formula	$C_{26}H_{29}NO_2$					
Molecular Weight	387.51	**CAS No.**	68392-35-8			
Solubility (25°C)*	In vitro	DMSO	78 mg/mL (201.28 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.
		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.	4.000mg/ml (10.32mM)	Taking the 1 mL working solution as an example, add 50 μL of 80 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.

* <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	2.5806 mL	12.9029 mL	25.8058 mL
5 mM	0.5161 mL	2.5806 mL	5.1612 mL
10 mM	0.2581 mL	1.2903 mL	2.5806 mL
50 mM	0.0516 mL	0.2581 mL	0.5161 mL

Biological Activity

Description	4-Hydroxytamoxifen (Afimoxifene) is the active metabolite of tamoxifen and a selective **estrogen receptor (ER)** modulator that is widely used in the therapeutic and chemopreventive treatment of breast cancer. It activates on-target modification frequency for intein-Cas9 variants.
In vitro	4-OHT is a potent activator of ER and has been shown to have a higher affinity for estrogen receptors. It has significant dose and time-dependent direct effects to alter the contractile function of isolated adult rat cardiac myocytes[1]. 4-HT activates on-target modification frequency for intein-Cas9 variants [3].

Protocol (from reference)

Cell Assay:[1]

- **Cell lines**
  Adult Rat and Mouse Cardiac Myocytes
- **Concentrations**
  0, 0.5, 1, 3, 5, and 10 μM
- **Incubation Time**
  15-45 min
- **Method**
  For sarcomere length measurements, cells are covered in Tyrode's containing 4OHT, allowed to reach 36 ± 1°C, and then stimulated at 0.2 Hz.

Animal Study:[2]

- **Animal Models**
  Sprague-Dawley rats
- **Dosages**
  21 mg/kg, 54 μmol/kg
- **Administration**
  oral administration

References

https://pubmed.ncbi.nlm.nih.gov/24205315/ https://pubmed.ncbi.nlm.nih.gov/10190564/ https://pubmed.ncbi.nlm.nih.gov/25848930/

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.

EU Headquarters
Gajeva ulica 28, HR-10000 Zagreb, Croatia

US Headquarters
12222 Merit Dr STE 130 Dallas, Texas, 75251

UK Headquarters
121 ABILITY HOUSE, BROOKER ROAD, EN9 1JH, ESSEX

Orders: Sales@capsidbio.com
Enquiries: info@capsidbio.com
www.capsidbio.com