Product Datasheet

Technical Data

Formula	$C_{21}H_{22}O_4$					
Molecular Weight	338.4	**CAS No.**	58749-22-7			
Solubility (25°C)*	In vitro	DMSO	67 mg/mL (197.99 mM)			
		Ethanol	67 mg/mL (197.99 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.	3.35mg/ml (9.90mM)	Taking the 1 mL working solution as an example, add 50 μL of 67 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.	0.47mg/ml (1.39mM)	Taking the 1 mL working solution as an example, add 50 μL of 9.4 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	2.9551 mL	14.7754 mL	29.5508 mL
5 mM	0.5910 mL	2.9551 mL	5.9102 mL
10 mM	0.2955 mL	1.4775 mL	2.9551 mL
50 mM	0.0591 mL	0.2955 mL	0.5910 mL

Biological Activity

Description	Licochalcone A is an estrogenic flavanoid extracted from licorice root, showing antimalarial, anticancer, antibacterial and antiviral activities. Phase 3.
In vitro	Licochalcone A markedly inhibits the in vitro growth of L. major amastigotes in human MDMs and U937 cells. [1] This compound shows antibacterial effects against all gram-positive bacteria tested and especially against all Bacillus spp. Tested with MICs of 2 to 3 micrograms/mL. [3] In CT-26 colon cancer cells, it reduces the cell viability and DNA synthesis. [4] It also interferes with MAPK signaling cascades, initiates ROS generation, induces oxidative stress and consequently causes BGC cell apoptosis. [5]
In vivo	In mice infected with L. major, licochalcone A (5 mg/kg, i.p.) completely prevents lesion development. In mice infected with L. donovani, this compound (150 mg/kg, p.o.) results in > 65 and 85% reductions of parasite loads in the liver and the spleen, respectively. [2] In CT-26 cell-inoculated Balb/c mice, this chemical (1 mg/kg, p.o.) inhibits the tumor growth, and alleviates cisplatin-induced nephrotoxicity and hepatotoxicity. [4]

Protocol (from reference)

Cell Assay: [4]

- **Cell lines**
  CT-26 cells
- **Concentrations**
  ~20 μM
- **Incubation Time**
  72 hours
- **Method**
  The viability of CT-26 mouse colon cancer cells is determined via a MTT assay. In brief, colon cancer cells are seeded onto each well of a 96-well plate with DMEM containing 10% FBS and cultured to adhere overnight. The cells are then treated with various concentrations of this compound in serum-free medium for 24 and 72 hr, respectively. Twenty microlitres of a MTT solution (5 mg/ml) is added to each well, and the cells are incubated for 4 hr at 37°. The medium is then removed, and 200 μL of dimethyl sulfoxide is added to each well. The absorbance is determined at 570 nm using a microplate reader.

Animal Study: [2]

- **Animal Models**
  Mice infected with L. major
- **Dosages**
  5 mg/kg/day
- **Administration**
  i.p. or p.o.

References

https://pubmed.ncbi.nlm.nih.gov/8109916/ https://pubmed.ncbi.nlm.nih.gov/8092835/ https://pubmed.ncbi.nlm.nih.gov/11959549/

+ Expand

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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