Topotecan (SKF 104864A)

Catalog No.C14167 Batch:C1416703

Product Datasheet

Technical Data

Formula	$C_{23}H_{23}N_3O_5$					
Molecular Weight	421.45	**CAS No.**	123948-87-8			
Solubility (25°C)*	In vitro	DMSO	84 mg/mL (199.31 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.	2.100mg/ml (4.98mM)	Taking the 1 mL working solution as an example, add 50 μL of 42 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.	0.150mg/ml (0.36mM)	Taking the 1 mL working solution as an example, add 50 μL of 3 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	2.3728 mL	11.8638 mL	23.7276 mL
5 mM	0.4746 mL	2.3728 mL	4.7455 mL
10 mM	0.2373 mL	1.1864 mL	2.3728 mL
50 mM	0.0475 mL	0.2373 mL	0.4746 mL

Biological Activity

Description	Topotecan(NSC609699,Nogitecan,SKFS 104864A) is an antineoplastic agent used to treat ovarian cancer that works by inhibiting **DNA topoisomerases**.
Targets	Topo I [1]
In vitro	Topotecan exhibits inhibition of outgrowth of the highly invasive and migratory leader cells (LC) population, however, topotecan enrichs the LC subset 20% above the untreated control level.[2]
In vivo	Topotecan (TPT), at least in part by inhibiting expression of Fli-1, significantly ameliorates lupus nephritis in NZBWF1 mice as effectively or better than cyclophosphamide (CYC).[3]

Protocol (from reference)

Cell Assay:[2]

- **Cell lines**
  LC-T2A-GFP lines
- **Concentrations**
  1 μM
- **Incubation Time**
  72 h
- **Method**
  LC-T2A-GFP lines are seeded at 1200 cells per well of a 384-well plate, adhered overnight, and treated with chemotherapeutics olaparib, rucaparib, paclitaxel, topotecan, carboplatin, cyclophosphamide, cisplatin, and doxorubicin at empirically determined clinically relevant doses (1 μM). Cells are maintained at 37 ℃ with 5% CO_2 in treatment for 72 h. Four focal areas per replicate well were imaged using 4X magnification on a bright field.

Animal Study:[3]

- **Animal Models**
  NZBWF1 female mice
- **Dosages**
  0.03 mg/kg, 0.1 mg/kg, 0.3mg/kg
- **Administration**
  i.p.

References

https://pubmed.ncbi.nlm.nih.gov/29412654/ https://pubmed.ncbi.nlm.nih.gov/34470672/ https://pubmed.ncbi.nlm.nih.gov/33559345/

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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