Product Datasheet

Technical Data

Formula	$C_{19}H_{12}F_5N_5$					
Molecular Weight	405.32	**CAS No.**	1782970-28-8			
Solubility (25°C)*	In vitro	DMSO	81 mg/mL (199.84 mM)			
		Ethanol	17 mg/mL (41.94 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.	2.050mg/ml (5.06mM)	Taking the 1 mL working solution as an example, add 50 μL of 41 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.	0.680mg/ml (1.68mM)	Taking the 1 mL working solution as an example, add 50 μL of 13.6 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	2.4672 mL	12.3359 mL	24.6719 mL
5 mM	0.4934 mL	2.4672 mL	4.9344 mL
10 mM	0.2467 mL	1.2336 mL	2.4672 mL
50 mM	0.0493 mL	0.2467 mL	0.4934 mL

Biological Activity

Description	PTC-028 is an orally bioavailable compound that decreases **BMI-1** levels by posttranslational modification.
Targets	BMI-1 [1]
In vitro	PTC-028 is an orally bioavailable compound that decreases BMI-1 levels by posttranslational modification. This compound treatment selectively inhibits cancer cells in clonal growth and viability assays, whereas normal cells remain unaffected. Hyperphosphorylation-mediated depletion of cellular BMI-1 by this agent coupled with a concurrent temporal decrease in ATP and a compromised mitochondrial redox balance potentiates caspase-dependent apoptosis[1].
In vivo	In vivo, orally administered PTC-028, as a single agent, exhibits significant antitumor activity comparable with the standard therapy in an orthotopic mouse model of ovarian cancer. After administration of single oral doses to the CD-1 mice, total plasma $AUC_{0\text{-}24h}$ are 10.9 and 26.1 mg/h/mL at doses of 10 and 20 mg/kg, showing dose proportional pharmacokinetics. The Cmax for this compound at 10 and 20 mg/kg is 0.79 and 1.49 mg/mL, respectively. The Cmax is reached at both dose levels 1-hour postdose after which plasma concentrations slowly reduce[1].

Protocol (from reference)

Cell Assay:[1]

- **Cell lines**
  Immortalized ovarian surface epithelium (OSE) or the fallopian tube epithelium(FTE) cells and ovarian cancer cells
- **Concentrations**
  0-500 nmol/L
- **Incubation Time**
  48 h
- **Method**
  Cells are treated with PTC-028 at the indicated concentrations for 48 hours and cellular viability is assessed using the MTS assay.

Animal Study:[1]

- **Animal Models**
  Preclinical model of ovarian cancer (NCr-nu mcie; 6 to 8 weeks old)
- **Dosages**
  10 mg/kg and 20 mg/kg
- **Administration**
  oral administration

References

https://pubmed.ncbi.nlm.nih.gov/29158468/

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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