Product Datasheet

Technical Data

Formula	$C_{42}H_{54}N_8O_3$					
Molecular Weight	718.93	**CAS No.**	2225938-17-8			
Solubility (25°C)*	In vitro	DMSO	100 mg/mL (139.09 mM)			
		Ethanol	50 mg/mL (69.54 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.
		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.	5.000mg/ml (6.95mM)	Taking the 1 mL working solution as an example, add 50 μL of 100 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.	2.500mg/ml (3.48mM)	Taking the 1 mL working solution as an example, add 50 μL of 50 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	1.3910 mL	6.9548 mL	13.9096 mL
5 mM	0.2782 mL	1.3910 mL	2.7819 mL
10 mM	0.1391 mL	0.6955 mL	1.3910 mL
50 mM	0.0278 mL	0.1391 mL	0.2782 mL

Biological Activity

Description	MS1943 is an orally bioavailable **EZH2** selective degrader that effectively reduces EZH2 levels in cells with IC50 of 120 nM for inhibiting EZH2 methyltransferase activity.
Targets	EZH2 [1] (Cell-free assay) 120 nM
In vitro	MS1943 is a first-in-class EZH2 selective degrader that effectively reduces EZH2 levels in cells. This compound has a profound cytotoxic effect in multiple TNBC cells, while sparing normal cells. It mediates its cytotoxic effects through ER stress and UPR induction in cells that are dependent for their growth on EZH2.[1]
In vivo	This compound is efficacious in vivo and well tolerated in mice at the efficacious dose, suggesting that pharmacologic degradation of EZH2 can be advantageous for treating the cancers that are dependent on EZH2.[1]

Protocol (from reference)

Cell Assay:[1]

- **Cell lines**
  MDA-MB-468 cells, HCC70 cells, BT549, HCC70 and MDA-MB-231 TNBC cells, KARPAS-422 and SUDHL8 lymphoma cells and PNT2 non-cancerous prostate cells
- **Concentrations**
  5 μM, 4 μM
- **Incubation Time**
  24 h, 6 h
- **Method**
  For the study using MDA-MB-468 cells, cells are cultured for 24 h in the presence of MS1943 (5 μM), alone or with different concentrations of the proteasome inhibitor MG132, and EZH2 protein levels are detected via western blot as described already. Vinculin is used as a loading control to normalize EZH2 protein levels. For the study using HCC70 cells, cells are cultured for 6 h in the presence of this compound (4 μM), alone or with different concentrations of MG132, and EZH2 protein levels are detected via western blot as described before. Actin is used as a loading control to normalize EZH2 protein levels.

Animal Study:[1]

- **Animal Models**
  eight-week-old female BALB/c nude mice
- **Dosages**
  150 mg/kg

- **Administration**
  IP

References

https://pubmed.ncbi.nlm.nih.gov/31819273/

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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