Product Datasheet

Technical Data

Formula	$C_{31}H_{39}Cl_2N_5$					
Molecular Weight	552.58	**CAS No.**	1872387-43-3			
Solubility (25°C)*	In vitro	Ethanol	49 mg/mL (88.67 mM)			
		DMSO	7 mg/mL (12.66 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	2%DMSO →[1] 40%PEG300 →[2] 5%Tween80 →[3] 53%ddH2O Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	0.200mg/ml (0.36mM)	Taking the 1 mL working solution as an example, add 20 μL of clarified DMSO stock solution of 10 mg/ml to 400 μL of PEG300, mix evenly to clarify it; add 50 μL of Tween80 to the above system, mix evenly to clarify it; then continue to add 530 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	1.8097 mL	9.0485 mL	18.0969 mL
5 mM	0.3619 mL	1.8097 mL	3.6194 mL
10 mM	0.1810 mL	0.9048 mL	1.8097 mL
50 mM	0.0362 mL	0.1810 mL	0.3619 mL

Biological Activity

Description	DC661 is a potent palmitoyl protein thioesterase 1 (PPT1) inhibitor. DC661 is capable of deacidifying the lysosome and inhibiting **autophagy** significantly better than HCQ. DC661 induces **apoptosis**.
Targets	Autophagy [1]
In vitro	Treatment of melanoma cells with DC661 results in a more striking accumulation of the autophagic vesicle marker LC3B-II at lower concentrations compared with either Lys05 or HCQ, reflecting more pronounced accumulation of autophagic vesicles at concentrations between 0.1 and 10 μmol/L. All cells die at concentrations above 10 μmol/L for this compound in contrast to Lys05 and HCQ. Compared with HCQ or Lys05, this compound treatment induces a significantly more potent inhibition of autophagic flux in melanoma cells expressing the mCherry-eGFP-LC3B reporter, and significantly higher levels of free GFP in melanoma cells expressing GFP-LC3B. This compound treatment resulted in significantly greater lysosomal deacidification compared with either HCQ or Lys05. The IC50 of this chemical in 72-hour MTT assays is 100-fold lower than that of HCQ across multiple cancer cell lines including colon and pancreas cancer cell lines. This compound suppresses long-term clonogenic growth of melanoma cells more effectively and induces significantly more apoptosis than Lys05, HCQ, or combined BRAF and MEK inhibition in BRAF-mutant melanoma cells[1].
In vivo	Treatment with the reduced dose (3 mg/kg, i.p.) of DC661 in a HT29 xenograft results in a significant reduction in tumor volume and almost complete suppression of daily tumor growth rate compared with control mice without significantly affecting mouse weight[1].

Protocol (from reference)

Cell Assay:[1]

- **Cell lines**
  A375P cells
- **Concentrations**
  0.1, 0.3, 1, 3, 10 μM
- **Incubation Time**
  6 hours
- **Method**
  A375P cells are treated with doses of HCQ, Lys05, or DC661 for 6 hours before lysates are immunoblotted.

Animal Study:[1]

- **Animal Models**
  HT29 colorectal xenograft
- **Dosages**
  3 mg/kg

- **Administration**
  i.p.

References

https://pubmed.ncbi.nlm.nih.gov/30442709/

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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