Iberdomide (CC-220)

Catalog No.C13648 Batch:C1364803

Product Datasheet

Technical Data

Formula	$C_{25}H_{27}N_3O_5$					
Molecular Weight	449.50	**CAS No.**	1323403-33-3			
Solubility (25°C)*	In vitro	DMSO	90 mg/mL (200.22 mM)			
		Ethanol	4 mg/mL (8.89 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.

* <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	2.2247 mL	11.1235 mL	22.2469 mL
5 mM	0.4449 mL	2.2247 mL	4.4494 mL
10 mM	0.2225 mL	1.1123 mL	2.2247 mL
50 mM	0.0445 mL	0.2225 mL	0.4449 mL

Biological Activity

Description	Iberdomide (CC-220) is a novel oral immunomodulatory compound that targets **cereblon**, part of the CRL4CRBN E3 ubiquitin ligase complex, with an IC50 of 60 nM in a competitive TR-FRET assay. Iberdomide (CC-220) induces **apoptosis** with antitumor and immunostimulatory activities.
Targets	cereblon [1] 60 nM
In vitro	Iberdomide (CC-220) is a potent anti-proliferative and pro-apoptotic compound that shows activity in several MM cell line categories. In cellular degradation assays, treatment with this compound results in the loss of Ikaros protein levels with an EC50 of 1 nM. It is similarly potent toward Aiolos, with an EC50 of 0.5 nM[1]. It induces PBMC-mediated killing of all MM cell lines regardless of the level of Cereblon expression and cell autonomous sensitivity. This compound acts through binding of Cereblon, leading to the degradation of the hematopoietic transcription factors Ikaros and Aiolos, followed by disruption of the MM promoting c-Myc/IRF4 axis[2].

Protocol (from reference)

Cell Assay:[1]

- **Cell lines**
  DF15 cells
- **Concentrations**
  60 nM
- **Incubation Time**
  5 h
- **Method**
  Cells were treated with Iberdomide (CC-220) for 5 h before harvest.

Animal Study:[3]

- **Animal Models**
  Transgenic mice
- **Dosages**
  10 mg/kg
- **Administration**
  o.g.

References

https://pubmed.ncbi.nlm.nih.gov/28425720/ http://www.bloodjournal.org/content/128/22/1591?sso-checked=… https://pubmed.ncbi.nlm.nih.gov/34258584/

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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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