Product Datasheet

Technical Data

Formula	$C_{15}H_9F_6N_5OS$					
Molecular Weight	421.32	**CAS No.**	223499-30-7			
Solubility (25°C)*	In vitro	DMSO	84 mg/mL (199.37 mM)			
		Ethanol	42 mg/mL (99.68 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	2.3735 mL	11.8675 mL	23.7349 mL
5 mM	0.4747 mL	2.3735 mL	4.7470 mL
10 mM	0.2373 mL	1.1867 mL	2.3735 mL
50 mM	0.0475 mL	0.2373 mL	0.4747 mL

Biological Activity

Description	YM-58483 (BTP2) is a blocker of **store-operated Ca2+ entry** (SOCE), which regulates the activation of non-excitable cells such as lymphocytes.
Targets	SOCE [1]
In vitro	YM-58483 (also known as BTP2) is a selective SOCE blocker that inhibits anti-CD3 antibody-induced sustained Ca2+ influx in Jurkat T cells. It does not cross-react with voltage-operated Ca2+ entry, K+ channels, or Cl− channels. This compound suppresses the CRAC, TRPC3, and TRPC5 channels, and also facilitates the TRPM4 channel. It suppresses cytokine production (IL-2, IL-4, IL-5, IFN-γ, etc.) and proliferation in T cells in vitro. YM-58483 inhibits the spleen cell proliferation associated with MLR by suppressing NF-AT activation via sustained influx of extracellular Ca2+[1]. It potently inhibits IL-2 production and NF-AT-driven promoter activity, but not AP-1-driven promoter activity in Jurkat cells[2].
In vivo	YM-58483 (BTP2) exhibits inhibitory effects on several types of allergic asthma models, such as airway hyperresponsiveness, early and late bronchoconstriction, and antigen-induced airway eosinophilia, with the reduction of IL-4 and leukotriene levels in the airways of rats and guinea pigs. It also inhibits the anti-host CTL response, donor T cell expansion, and IFN-γ production in GVHD mice. This compound selectively inhibits store-operated Ca^{2+} influx and does not affect baseline intracellular Ca^{2+} levels. It caused no apparent change in general activity in mice at doses up to 30 mg/kg, p.o.[1].

Protocol (from reference)

Cell Assay:[2]

- **Cell lines**
  Jurkat cells
- **Concentrations**
  0.03-3 μM
- **Incubation Time**
  30 min
- **Method**
  Jurkat cells ($1×10^7$ cells/ml) were treated with varying concentrations of YM-58483 (BTP2) for 30 min at 37°C. After this incubation, the cells were stimulated with 1 μM ionomycin for 30 min at 37°C. Following stimulation, the cells were centrifuged at 200×g for 2 min and solubilized in 100 μl of Triton X-100 lysis buffer. The cell lysate was centrifuged at 15,000×g for 20 min; the clarified lysate was subjected to SDS-PAGE; and NF-ATc2 was detected by Western blotting with anti-NF-ATc2 mAb.

Animal Study:[1]

- **Animal Models**
  Male C57BL/6, BDF1((C57BL/6×DBA2)F1), DBA2 and Balb/c mice
- **Dosages**
  1-30 mg/kg
- **Administration**
  p.o.

References

https://pubmed.ncbi.nlm.nih.gov/18793756/ https://pubmed.ncbi.nlm.nih.gov/12707319/

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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