Product Datasheet

Technical Data

Formula	$C_{19}H_{19}N_3O_2$					
Molecular Weight	321.37	**CAS No.**	1819363-80-8			
Solubility (25°C)*	In vitro	DMSO	64 mg/mL (199.14 mM)			
		Water	Insoluble			
		Ethanol	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	3.1117 mL	15.5584 mL	31.1168 mL
5 mM	0.6223 mL	3.1117 mL	6.2234 mL
10 mM	0.3112 mL	1.5558 mL	3.1117 mL
50 mM	0.0622 mL	0.3112 mL	0.6223 mL

Biological Activity

Description

PFI-3 is a selective chemical probe for **SMARCA bromodomains**, including SMARCA2, SMARCA4 and PB1(5) bromodomains.

Targets

PB1(5) bromodomains [1]	SMARCA4 [4] (Cell-free assay)	SMARCA2B [4] (Cell-free assay)	SMARCA2A [4] (Cell-free assay)
	55 nM(Kd)	72 nM(Kd)	110 nM(Kd)

In vitro

PFI-3 shows a significant selectivity for PB1(5) and SMARCA2/4 over 36 other tested kinases[1]. This compound is a potent and cell active protein interaction inhibitor that selectively binds to essential BAF bromodomains. It is screened in a commercial screening panel comprising 102 cellular receptors as well as 30 enzyme assays, revealing only interactions against four GPCRs with micromolar affinity and no significant additional interactions outside the BRD family, confirming its excellent broader pharmacological selectivity. Stability measurements confirmed that this chemical has a half-life in aqueous solutions exceeding 7 days at 37°C. In long-term experiments, it significantly altered gene expression programs that are important for differentiation of stem cells. This compound mimics the effect of Brg1 deletion, resulting in an increase of the repressive H3K27me3 mark at the TSSs and Stat3 binding sites of these genes[2]. It has a half-life of >250 h in PBS, pH 7.4, at 20 °C[3].

Protocol (from reference)

Cell Assay:[2]

- **Cell lines**
  trophoblast stem cells
- **Concentrations**
  2 μM
- **Incubation Time**
  24 h
- **Method**
  TSC are cultured in stemness or differentiation conditions and treated with 2 μM PFI-3 or 10 μM control compound or indicated concentrations for 24 hours or during the entire differentiation induction (4 days), respectively. In case of the differentiation samples, this compound or control compound exposure started 1 day before the induction of differentiation. RNA was isolated as for the ESC samples.

References

http://www.thesgc.org/chemical-probes/PFI-3 https://pubmed.ncbi.nlm.nih.gov/26702435/ https://pubmed.ncbi.nlm.nih.gov/27115555/

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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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