PNU-74654

Catalog No.C13412 Batch:C1341203

Product Datasheet

Technical Data

Formula	$C_{19}H_{16}N_2O_3$					
Molecular Weight	320.34	**CAS No.**	113906-27-7			
Solubility (25°C)*	In vitro	DMSO	64 mg/mL (199.78 mM)			
		Ethanol	5 mg/mL (15.6 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	3.1217 mL	15.6084 mL	31.2168 mL
5 mM	0.6243 mL	3.1217 mL	6.2434 mL
10 mM	0.3122 mL	1.5608 mL	3.1217 mL
50 mM	0.0624 mL	0.3122 mL	0.6243 mL

Biological Activity

Description	PNU-74654 disrupts the **Wnt signaling pathway** via inhibition of the interaction (KD50=450 nM) between β-catenin and Tcf4.
Targets	Wnt/β-catenin [1] (Cell-free assay) 450 nM(Kd)
In vitro	The PNU-74654 (PNU) compound is a non-FDAapproved drug which prevents that Tcf from binding to beta-catenin, acting as a Wnt/beta-catenin antagonist. In NCI-H295 cells, this compound significantly decreases cell proliferation 96 h after treatment, increases early and late apoptosis, decreases nuclear betacatenin accumulation, impairs CTNNB1/beta-catenin expression and increases betacatenin target genes 48 h after treatment. No effects are observed on HeLa cells. In NCI-H295 cells, this chemical decreases cortisol, testosterone and androstenedione secretion 24 and 48 h after treatment. Additionally, in NCI-H295 cells, it decreases SF1 and CYP21A2 mRNA expression as well as the protein levels of STAR and aldosterone synthase 48 h after treatment. In Y1 cells, this compound impairs corticosterone secretion 24 h after treatment but does not decrease cell viability[2].

Protocol (from reference)

Cell Assay:[2]

- **Cell lines**
  Adrenal (NCI-H295 and Y1) and non-adrenal (HeLa) cell lines
- **Concentrations**
  5-200 μM
- **Incubation Time**
  24-96 h
- **Method**
  NCI-H295 cells are plated at 200,000 cells per well in 24-well plates for gene expression, protein analysis and adrenal steroid measurements. After 48 h, cells are treated with vehicle (0.1%-0.4% DMSO) or 10, 50, 100 and 200 μM PNU-74654. After 24 and 48 h, medium supernatants are collected for adrenal steroid measurements. Adherent cells are fixed for immunofluorescence or harvested for RNA and protein isolation.

References

https://pubmed.ncbi.nlm.nih.gov/16568448/ https://pubmed.ncbi.nlm.nih.gov/26515592/

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.

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