Data Sheet (Cat.No.T12330)

TargetMol

OT-82

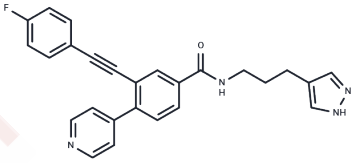
Chemical Properties

CAS No. : 1800487-55-1

Formula: C26H21FN4O

Molecular Weight: 424.47

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	OT-82 is a potent, selective, and orally active inhibitor of nicotinamide phosphoribosyltransferase (NAMPT).
Targets(IC50)	Caspase,NAMPT
In vitro	**METHODS**: OT-82 (0.001-10 μM) was used to treat human cell lines derived from HP and non-HP cancers, and the IC50 values were determined. **RESULTS**: The average IC50 of OT-82 was significantly higher in non-HP cancer cells compared with HP cancer cells (13.03±2.94 nM vs 2.89±0.47 nM; $p < 0.008$). [1] **METHODS**: MV4-11 cells were treated with OT-82 (0.001-10 nM), and the changes in NAD were observed for 24 hours, and the changes in ATP were observed for 24 hours and 48 hours. **RESULTS**: OT-82 treatment resulted in a dose-dependent decrease in NAD and ATP concentrations in MV4-11 cells. OT-82 treatment of MV4-11 cells in vitro for 48 hours resulted in caspase-3 activation, an increase in the proportion of cells with sub-G1 DNA content, and mitochondrial membrane depolarization. OT-82 induced apoptosis and cell death by inhibiting NAMPT, leading to NAD and ATP depletion. [1]
In vivo	**METHODS**: OT-82 (25 or 50 mg/kg) was administered orally 6 days per week for 3 weeks. The therapeutic efficacy of OT-82 was tested in vivo using subcutaneous (SC) and systemic mouse xenograft models of HP malignancies. **RESULTS**: OT-82 caused a dose-dependent inhibition of SC growth of human AML-derived MV4-11 cells; the 25 mg/kg dose resulted in a 3-fold reduction in mean tumor volume at day 17 of treatment, while higher doses resulted in complete eradication of tumors within 10 days of treatment initiation. [1]

Solubility Information

Solubility	DMSO: 80 mg/mL (188.47 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (7.77 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.*

In vivo Formulation	*Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3559 mL	11.7794 mL	23.5588 mL
5 mM	0.4712 mL	2.3559 mL	4.7118 mL
10 mM	0.2356 mL	1.1779 mL	2.3559 mL
50 mM	0.0471 mL	0.2356 mL	0.4712 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Korotchkina L, et al. OT-82, a novel anticancer drug candidate that targets the strong dependence of hematological malignancies on NAD biosynthesis. Leukemia. 2020 Jul;34(7):1828-1839.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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