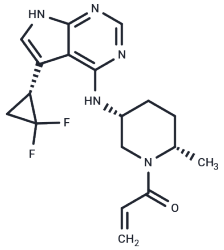
Data Sheet (Cat.No.T210785)

TargetMol

Modzatinib

Chemical Properties



CAS No. : 2411407-25-3

Formula: C18H21F2N5O

Molecular Weight: 361.39

Storage: Keep away from moisture,Keep away from direct sunlight,Store at low temperature,Store under nitrogen
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	Modzatinib (ITKkinase-IN-1) (compound I) is an inhibitor targeting ITK kinase with an IC50 of 8 nM in Jurkat cells, useful for researching inflammatory diseases. Modzatinib (ITKkinase-IN-1) (compound I) inhibits JAK3 in hPBMC cells with an IC50 of 23 nM (based on IL-2/pSTAT5 levels) and shows no inhibitory effect on JAK2. Modzatinib (ITKkinase-IN-1) (compound I) is therefore applied in immunological signaling research to study T-cell receptor-associated kinase pathways, JAK/STAT signaling selectivity, and cytokine response modulation in primary immune cell systems.
Targets(IC50)	JAK,Tyrosine Kinases
In vitro	Methods:Whole blood was treated with modzatinib at concentrations of 0.01-1000 ng/mL for 2-18 hours, and its effects on related signaling pathways and gene expression were detected. Results:Modzatinib inhibited aCD3/CD28-induced mRNA expression of IL2 and IFNγ, as well as IL15-mediated activation of pSTAT5 [1].
In vivo	Methods:Rat adjuvant-induced arthritis (AIA) model and mouse T cell transfer colitis model were established. Modzatinib was administered continuously via different routes, and changes in inflammation-related indicators were observed. Results: 1.In rat AIA model, intragastric administration of Modzatinib at 5-15 mg/kg twice daily for 14 consecutive days alleviated ankle swelling in a dose-dependent manner. 2.In mouse T cell transfer colitis model, dietary administration of the compound at 100-300 ppm once daily for 35 consecutive days ameliorated inflammatory lesions in colon and ileum dose-dependently [1].

Solubility Information

Solubility	DMSO: 4.5 mg/mL (12.45 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7671 mL	13.8355 mL	27.6709 mL
5 mM	0.5534 mL	2.7671 mL	5.5342 mL
10 mM	0.2767 mL	1.3835 mL	2.7671 mL
50 mM	0.0553 mL	0.2767 mL	0.5534 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

David Randolph ANDERSON, et al. Pyrrolopyrimidine compositions for treatment of itk mediated conditions. WO2024102778A1. 2024-05-16.