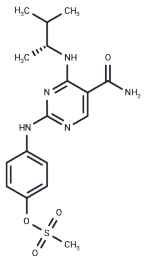
Data Sheet (Cat.No.T61814)

TargetMol

JAK3-IN-9

Chemical Properties



CAS No. : 1430095-30-9

Formula: C17H23N5O4S

Molecular Weight: 393.46

Storage: 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	JAK3-IN-9 is a potent and orally active inhibitor of the Janus kinase 3 (JAK3) enzyme, displaying an impressive IC50 value of 1.7 nM. It exhibits high selectivity towards the JAK3 signaling pathway, making it a valuable tool for studying autoimmune diseases. Additionally, JAK3-IN-9 possesses desirable characteristics such as low toxicity and excellent oral bioavailability. It also demonstrates promising anti-arthritis activity, thus enhancing its potential as a therapeutic agent [1].
Targets(IC50)	Others,JAK
In vitro	JAK3-IN-9 (compound 11i) selectively inhibits JAK3 with an IC50 of 1.7 nM [1]. In Cell Viability Assays using PBMCs at 1 μM concentration and 30-minute incubation, it shows preferential inhibition of JAK3 [1].
In vivo	JAK3-IN-9, referred to as compound 11i, demonstrated selective inhibition of JAK3 cytokine signaling in primary cells when administered orally at dosages of 3, 10, and 30 mg/kg to female Lewis rats once daily for 20 days. Additionally, it exhibited a high area under the curve (AUC) of 2104 μg/ml, increased the half-life to 2.56 hours, and showed favorable oral bioavailability of 48% upon a single intravenous injection at 1 mg/kg in male DBA1j mice aged 8 to 12 weeks. Furthermore, JAK3-IN-9 significantly reduced paw swelling in a dose-dependent manner, with an effective dose (ED50) value of 10 mg/kg, after oral administration once daily for 20 days at a dose of 30 mg/kg. These results, obtained from studies conducted on male DBA1j mice and female Lewis rats, indicate its potential as an anti-arthritis agent in the CIA mice model.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5416 mL	12.7078 mL	25.4155 mL
5 mM	0.5083 mL	2.5416 mL	5.0831 mL
10 mM	0.2542 mL	1.2708 mL	2.5416 mL
50 mM	0.0508 mL	0.2542 mL	0.5083 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.

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