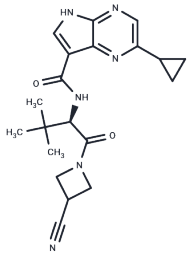
# Data Sheet (Cat.No.T11703)

TargetMol

## JAK-IN-1

### Chemical Properties



CAS No. : 1334673-53-8

Formula: C20H24N6O2

Molecular Weight: 380.44

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 | JAK-IN-1 shows improved selectivity for JAK3 over JAK1. JAK-IN-1 is a JAK1/2/3 inhibitor with IC50s of 0.26, 0.8 and 3.2 nM, respectively. |
| Targets(IC50) | Others,JAK |
| In vitro | JAK-IN-1 exhibits both mechanistic and functional activity in cell-based assays involving T-cells, a primary cell type where JAK3 has potential relevance. It effectively inhibits the proliferation of human CD4 and CD8 T cells in a dose-dependent fashion when stimulated by anti-CD3/anti-CD28 antibody-coated beads, which partially simulate the activation signals delivered to a T cell by an antigen-presenting cell. |
| In vivo | JAK-IN-1 effectively inhibits IL-2-induced STAT5 phosphorylation in both a dose- and concentration-dependent fashion, achieving roughly 50% reduction at a dose of 10 mg/kg (plasma concentration approximately 480 nM). Demonstrating selectivity for JAK3 in vivo, JAK-IN-1 exhibits greater efficacy in inhibiting JAK1/JAK3-driven signaling compared to pathways involving JAK2 or the combination of JAK1, JAK2, and TYK2, as evaluated through whole blood assays. Additionally, JAK-IN-1 strongly suppresses IL-2 stimulated plasma concentrations corresponding to each administered dose. |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.6285 mL | 13.1427 mL | 26.2854 mL |
| 5 mM | 0.5257 mL | 2.6285 mL | 5.2571 mL |
| 10 mM | 0.2629 mL | 1.3143 mL | 2.6285 mL |
| 50 mM | 0.0526 mL | 0.2629 mL | 0.5257 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

Soth M, et al. 3-Amido pyrrolopyrazine JAK kinase inhibitors: development of a JAK3 vs JAK1 selective inhibitor and evaluation in cellular and in vivo models. J Med Chem. 2013 Jan 10;56(1):345-56.



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