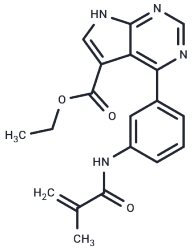
Data Sheet (Cat.No.T5492)

TargetMol

JAK3-IN-6

Chemical Properties



CAS No. : 1443235-95-7

Formula: C19H18N4O3

Molecular Weight: 350.37

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-6 is irreversible Janus Associated Kinase 3 (JAK3) inhibitor, with an IC50 of 0.15 nM
Targets(IC50)	JAK
In vitro	a potent inhibitor of JAK3 (0.15 nM) was 4300-fold selective for JAK3 over JAK1 in enzyme assays, 67-fold (IL-2 vs. IL-6) or 140-fold (IL-2 vs. EPO or GMCSF) selective in cellular reporter assays and >35-fold selective in human PBMC assays (IL-7 vs. IL-6 or GMCSF). In vivo, selective JAK3 inhibition was sufficient to block the development of inflammation in a rat model of Rheumatoid Arthritis, while sparing hematopoiesis.
Animal Research	Female Lewis rats were purchased and housed . 48 rats were divided into six groups (n=8/group). Group 1 were drug-na?ve i.e. no compounds were administered throughout the study. On the afternoon of Day 1 (4pm), ABT or vehicle (1 ml/kg p.o.) was administered to Groups 2-5. Days 2-11 (8 am), each animal in Groups 2-5 were administered ABT 10 mpk qd (1 ml/kg p.o.), immediately followed by either vehicle or compound at 5ml/kg p.o. Group 6 animals received vehicle only (5 ml/kg p.o.). Days 2-11 (4 pm) Groups 2-5 were administered vehicle or compound at 5 ml/kg p.o. Animals were monitored and weighed throughout the study. On Day 10, under isoflurane anesthesia, 3 animals from Groups 2-6 were bled via the jugular vein for PK analysis at 4 and 8 h post-8 am dose. On Day 11, blood samples were collected, as described above, at 0 (16 h post-Day 10 pm dose) and 2 h post-am dose for PK, hematology, and clinical chemistry analysis. All remaining animals were euthanized at 2 hrs post-dosing on Day 11 and blood samples were collected for PK, hematology, and clinical chemistry analysis. Data were analyzed using Graphpad prism software. Statistical analyses were performed using a one-way ANOVA with Dunnett s post-hoc test for group comparisons to ABT + vehicle treatment.

Solubility Information

Solubility	DMSO: 250 mg/mL (713.53 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (28.54 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (28.54 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. 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	2.8541 mL	14.2706 mL	28.5413 mL
5 mM	0.5708 mL	2.8541 mL	5.7083 mL
10 mM	0.2854 mL	1.4271 mL	2.8541 mL
50 mM	0.0571 mL	0.2854 mL	0.5708 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

Elwood F, et al. Evaluation of JAK3 Biology in Autoimmune Disease Using a Highly Selective, Irreversible JAK3 Inhibitor. J Pharmacol Exp Ther. 2017 May;361(2):229-244.