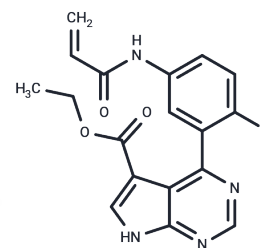


JAK3i

Chemical Properties

CAS No. :	1918238-72-8
Formula:	C ₁₈ H ₁₅ N ₃ O ₃
Molecular Weight:	354.34
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	JAK3i is a selective covalent inhibitor of JAK 3 kinase. JAK3i reveals two distinct temporal waves of STAT5 phosphorylation and more potently targets the second wave, which is required for cell cycle progression and T cell proliferation.
Targets(IC50)	JAK
In vitro	We targeted the key downstream IL2R-intermediate JAK 3 using a clinically relevant highly specific JAK3-inhibitor (JAK3i; PF-06651600) that potently inhibited STAT5-phosphorylation in vitro. Low-dose JAK3i combined with cellular and peptide vaccine strategies further decreased tumor load compared with both monotherapies alone.[1] The subsequent phenotype ontology results have revealed JAK3i, PLCG2, and ZEB2 as key hub genes contributing to the inflammation underlying cardiovascular and immune response related phenotypes.[2]

Solubility Information

Solubility	DMSO: 10 mg/mL (28.22 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8221 mL	14.1107 mL	28.2215 mL
5 mM	0.5644 mL	2.8221 mL	5.6443 mL
10 mM	0.2822 mL	1.4111 mL	2.8221 mL
50 mM	0.0564 mL	0.2822 mL	0.5644 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

Dammeijer F, et al. Low-Dose JAK3 Inhibition Improves Antitumor T-Cell Immunity and Immunotherapy Efficacy. *Mol Cancer Ther.* 2022;21(9):1393-1405.

Awan Z, et al. Identifying significant genes and functionally enriched pathways in familial hypercholesterolemia using integrated gene co-expression network analysis. *Saudi J Biol Sci.* 2022;29(5):3287-3299.

Smith GA, et al. Essential biphasic role for JAK3 catalytic activity in IL-2 receptor signaling. *Nat Chem Biol.* 2016;12(5):373-379.

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