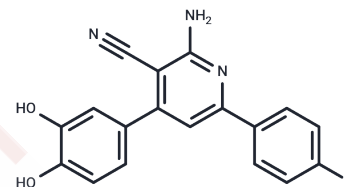


IL-4-inhibitor-1

Chemical Properties

CAS No. :	1332184-63-0
Formula:	C18H12FN3O2
Molecular Weight:	321.31
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	IL-4 inhibitor is an inhibitor of IL-4. It binds to IL-4 with a Kd value of 1.8 μM and inhibits IL-4 activity in a cell-based reporter assay (EC50 = 1.81 μM). It is selective for IL-4 over IL-13 (EC50 = 18.2 μM). IL-4 inhibitor inhibits IL-4-induced STAT6 phosphorylation in THP-1 monocytes (EC50 = 3.1 μM), indicating inhibition of the IL-4-JAK1-STAT6 signaling pathway.
Targets(IC50)	IL Receptor, Interleukin
In vitro	IL-4-inhibitor-1 exhibits functional disruption of type II IL-4 binding in a cellular context and dose-dependent reduces pSTAT-6 levels (EC50 = 3.1 μM)[1].

Solubility Information

Solubility	Ethanol: 10 mg/mL (31.12 mM), Sonication is recommended. DMF: 27 mg/mL (84.03 mM), Sonication is recommended. DMSO:PBS (pH 7.2) (1:5): 0.1 mg/mL (0.31 mM), Sonication is recommended. DMSO: 60 mg/mL (186.74 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 6 mg/mL (18.67 mM), Solution. 10% DMSO+90% Saline: < 6 mg/mL (18.67 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1123 mL	15.5613 mL	31.1226 mL
5 mM	0.6225 mL	3.1123 mL	6.2245 mL
10 mM	0.3112 mL	1.5561 mL	3.1123 mL
50 mM	0.0622 mL	0.3112 mL	0.6225 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

Quinnell, S.P., Leifer, B.S., Nestor, S.T., et al. A small-molecule inhibitor to the cytokine interleukin-4 ACS Chem. Biol. 15(10)2649-2654(2020)

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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