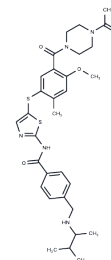


## ITK inhibitor

## Chemical Properties

CAS No. :	439574-61-5
Formula:	C31H39N5O4S2
Molecular Weight:	609.8
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	Interleukin-2-inducible T cell kinase (ITK) is a non-receptor tyrosine kinase expressed in T cells, NKT cells and mast cells which plays a crucial role in regulating the T cell receptor (TCR), CD28, CD2, chemokine receptor CXCR4, and FcepsilonR-mediated signaling pathways. ITK inhibitors can be used for the treatment of inflammation and immune-mediated disorders. ITK inhibitor (N-[5-[[3-[(4-Acetylpiperazin-1-yl)carbonyl]-4-methyl-6-methoxy-phenyl]thio]thiazol-2-yl]-4-(N-1,2-dimethylpropylaminomethyl)benzamide) is the analogue of BMS-509744, which can potently and selectively inhibit Itk kinase activity.
Targets(IC50)	Others
In vitro	BMS-509744 could reduce TCR-induced functions including PLCγ1 tyrosine phosphorylation, calcium mobilization, IL-2 secretion, and T-cell proliferation in vitro in both human and mouse cells [1].
In vivo	BMS-509744 suppressed the production of IL-2 induced by anti-TCR antibody administered to mice. BMS-509744 also significantly diminishes lung inflammation in a mouse model of ovalbumin-induced allergy/asthma [1].

## Solubility Information

Solubility	DMSO: Soluble (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	1.6399 mL	8.1994 mL	16.3988 mL
5 mM	0.328 mL	1.6399 mL	3.2798 mL
10 mM	0.164 mL	0.8199 mL	1.6399 mL
50 mM	0.0328 mL	0.164 mL	0.328 mL

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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

Lin TA, McIntyre KW, Das J, Liu C, O'Day KD, Penhallow B, Hung CY, Whitney GS, Shuster DJ, Yang X, Townsend R, Postelnek J, Spergel SH, Lin J, Moquin RV, Furch JA, Kamath AV, Zhang H, Marathe PH, Perez-Villar JJ, Doweiko A, Killar L, Dodd JH, Barrish JC, Wityak J, Kanner SB. Selective Itk inhibitors block T-cell activation and murine lung inflammation. *Biochemistry*. 2004 Aug 31;43(34):11056-62.

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