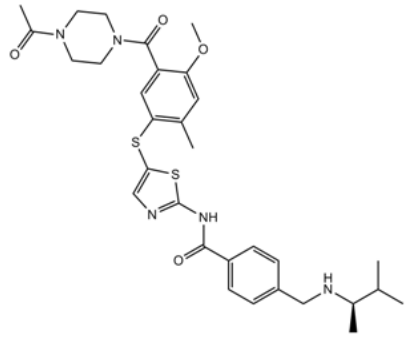
Product Name: ITK inhibitor

Revision Date: 6/30/2016

Product Data Sheet

Chemical Properties



Product Name: ITK inhibitor

Cas No.: 439574-61-5

M.Wt: 609.82

Formula: C31H39N5O4S2

Chemical Name: N-[5-[5-(4-acetylpiperazine-1-carbonyl)-4-methoxy-2-methylphenyl]sulfanyl-1,3-thiazol-2-yl]-4-[(3-methylbutan-2-ylamino)methyl]benzamide

Canonical SMILES: CC1=C(C=C(C(=C1)OC)C(=O)N2CCN(CC2)C(=O)C)SC3=CN=C(S3)NC(=O)C4=CC=C(C=C4)CNC(C)C(C)C

Solubility: Soluble in DMSO

Storage: Store at -20°C

General tips: For obtaining a higher solubility , please warm the tube at 37° C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20° C for several months.

Shopping Condition: Evaluation sample solution : ship with blue ice
All other available size: ship with RT , or blue ice upon request

Biological Activity

Targets : Tyrosine Kinase

Pathways: ITK

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.
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].
Clinical trial: Up to now, both BMS-509744 and ITK inhibitor is still in the preclinical development stage.

***Reference**:*

[1] 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, Doweyko 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.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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