

RO9021

Chemical Properties

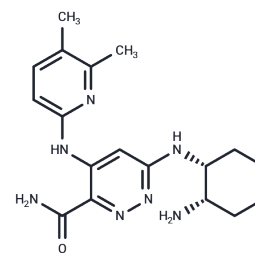
CAS No. : 1446790-62-0

Formula: C₁₈H₂₅N₇O

Molecular Weight: 355.44

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	RO9021 is an orally bioavailable, novel ATP-competitive SYK inhibitor [average IC ₅₀ : 5.6 nM].
Targets(IC ₅₀)	Syk
In vitro	RO9021 effectively inhibits the anti-IgM induced phosphorylation of key signaling proteins including BTK, PLC γ 2, AKT, and ERK, thereby demonstrating its capacity to block SYK kinase activity and consequently attenuate the B-cell receptor (BCR) downstream signaling cascade. This compound selectively targets B-cell receptor signaling, underscored by its role as a highly selective inhibitor of SYK. Its selectivity is evidenced by low S-scores of 0.003 for S(99) and 0.015 for S(90), indicating that among 392 kinases tested, SYK is the sole kinase significantly competed by RO9021 with 99% effectiveness. Moreover, RO9021 exhibits comparable inhibitory potency (IC ₅₀ =22.8±1.7 nM) in assays measuring Fc ϵ R-mediated mast cell activation and degranulation, highlighting its broad potential in modulating immune responses [1].

Solubility Information

Solubility	DMSO: 3 mg/mL (8.44 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	2.8134 mL	14.0671 mL	28.1341 mL
5 mM	0.5627 mL	2.8134 mL	5.6268 mL
10 mM	0.2813 mL	1.4067 mL	2.8134 mL
50 mM	0.0563 mL	0.2813 mL	0.5627 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

Liao C, et al. Selective inhibition of spleen tyrosine kinase (SYK) with a novel orally bioavailable small molecule inhibitor, RO9021, impinges on various innate and adaptive immune responses: implications for SYK inhibitors in autoimmune disease therapy.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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