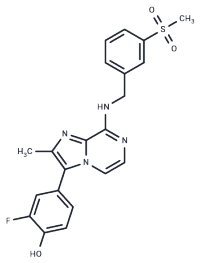
Data Sheet (Cat.No.T16530)

TargetMol

BF738735

Chemical Properties



CAS No. : 1436383-95-7

Formula: C21H19FN4O3S

Molecular Weight: 426.46

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	BF738735 is a selective inhibitor of phosphatidylinositol 4-kinase III beta (PI4KIIIβ, IC50 = 5.7 nM) showing higher activity over α(IC50 = 1.7 μM). BF738735 exhibits a broad spectrum of antiviral activity.
Targets(IC50)	Antiviral,Reverse Transcriptase,PI4K
In vitro	BF738735 effectively inhibits all viruses tested, with EC50s ranging between 4 and 71 nM. The cytotoxicity of BF738735, determined in parallel with the EC50 and using the same culture conditions for 3 to 4 days, is low, with CC50 values ranging from 11 to 65 μM, resulting in high selectivity indices. BF738735 exhibits a broad spectrum of antiviral activity, as it inhibits all tested species of enteroviruses and rhinoviruses, with 50% effective concentrations ranging between 4 and 71 nM. BF738735 also impairs PI4KIIIα, but only at an ~300-fold-higher concentration (IC50 of 1.7 μM). The activity of BF738735 is analyzed on a set of 150 cellular kinases, including 13 lipid kinases at a concentration of 10 μM. For all kinases, the inhibition is less than 10%, indicating that BF738735 specifically inhibits PI4KIIIβ in vitro. Low concentrations of BF738735 decrease the amount of luciferase to GuaHCl-treated levels, suggesting that the BF738735 blocks viral RNA replication. The EC50 of BF738735 in this assay is 77 nM, which is comparable to the inhibition observed in the multicycle assay for coxsackievirus serotype B3 (CVB3)[1].
In vivo	BF738735 demonstrates favorable tolerability in test subjects, achieving effective plasma concentrations of the antiviral. Notably, a complete inhibition of the target activity is achieved at a dosage of 25 mg/kg, while a partial inhibition is observed with a 5 mg/kg dose[2].

Solubility Information

Solubility	DMSO: 125 mg/mL (293.11 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: 4 mg/mL (9.38 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3449 mL	11.7244 mL	23.4489 mL
5 mM	0.469 mL	2.3449 mL	4.6898 mL
10 mM	0.2345 mL	1.1724 mL	2.3449 mL
50 mM	0.0469 mL	0.2345 mL	0.469 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

V Saarnio. Antiviral Molecules of Enteroviruses. 13.1.2017.
van der Schaar HM, et al. A novel, broad-spectrum inhibitor of enterovirus replication that targets host cell factor phosphatidylinositol 4-kinase IIIβ. Antimicrob Agents Chemother. 2013 Oct;57(10):4971-81.