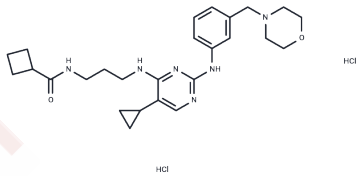
Data Sheet (Cat.No.T36994)

TargetMol

MRT 67307 dihydrochloride

Chemical Properties



CAS No. : 1781882-89-0

Formula: C26H38Cl2N6O2

Molecular Weight: 537.53

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	MRT 67307 dihydrochloride is a dual inhibitor of the IKKε and TBK-1 with IC50s of 160 and 19 nM, respectively. MRT67307 dihydrochloride also inhibits ULK1 and ULK2 with IC50s of 45 and 38 nM, respectively. MRT67307 dihydrochloride also blocks autophagy in cells.
Targets(IC50)	Autophagy,IκB/IKK,SIK
In vitro	MRT 67307 dihydrochloride inhibits IKK and TBK1 with IC50 of 160 and 19 nM when assayed at 0.1 mM ATP in vitro, but did not inhibit IKKα or IKKβ even at 10 μM[1]. MRT 67307 dihydrochloride (2 μM) prevents the phosphorylation of IRF3 in bone-marrow-derived macrophages (BMDMs). MRT 67307 dihydrochloride (2 μM) dose not suppresse the activation of JNK or p38 MAPK by poly(I:C)[1]. MRT 67307 dihydrochloride (1 nM-10 μM) prevents the production of IFNβ in macrophages[1]. MRT 67307 dihydrochloride (10 μM) is sufficient to reduce phospho-ATG13 to control levels[2]. MRT 67307 dihydrochloride (10 μM) blocks autophagy in mouse embryonic fibroblasts (MEFs)[2]. MRT 67307 dihydrochloride (5 μM; 4 h) abrogates TBK1/IKKε-induced CYLD phosphorylation in 293T cells[3].

Solubility Information

Solubility	DMSO: 82.8 mg/mL (154.04 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8604 mL	9.3018 mL	18.6036 mL
5 mM	0.3721 mL	1.8604 mL	3.7207 mL
10 mM	0.186 mL	0.9302 mL	1.8604 mL
50 mM	0.0372 mL	0.186 mL	0.3721 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

Clark et al (2012) Phosphorylation of CRTC3 by the salt-inducible kinases controls the interconversion of classically activated and regulatory macrophages. Proc.Natl.Acad.Sci.U.S.A. 109 16986
Clark et al (2011) Novel cross-talk within the IKK family controls innate immunity. Biochem.J. 434 93
Smith et al (2011) The role of TBK1 and IKKe in the expression and activation of Pellino 1. Biochem.J. 434 537
Galluzzi et al (2017) Pharmacological modulation of autophagy: therapeutic potential and persisting obstacles. Nat.Rev.Drug.Discov.