Data Sheet (Cat.No.T23028)

TargetMol®
YOUR TARGET MOLECULES

MRT67307 HCl (1190378-57-4 free base)

Chemical Properties

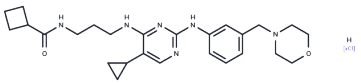
CAS No. :

Formula: C26H36N6O2· xHCl

Molecular Weight:

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	MRT67307 is an inhibitor for TBK1, IKKε , MARK1-4 and NUAK1 with IC50 value of 19, 160, 27-52 and 230nM , respectively [1]. It is an inhibitor for ULK1and ULK2 with IC50 value of 45 and 38nM, respectively [2]. Also, it is a salt inducible kinase (SIK) inhibitor with IC50 value of 250, 67 and 430nM for SIK1, SIK2 and SIK3, respectively. SIKs prevent the formation of regulatory macrophages and their inhibition induces increasing in some markers of regulatory macrophages, such as IL-10 and other anti-inflammatory molecules. IKKε and TBK-1 mediate the phosphorylation of interferon regulatory factor 3 (IRF3). MARK1 is a Serine/threonine-protein kinase. In macrophages, MRT67307 prevented the production of IFNβ and the phosphorylation of IRF3 without suppressing the activation of NF-κB, which showed that MRT67307 blocked the induction of Pellino 1 through inhibiting TBK1/IKKε kinase activity [1] [3]. Also, MRT67307 completely blocked the TBK1- or IKKε-induced decrease in the mobility of Pellino 1 [3]. Exposed macrophages to MRT67307 increased the levels of the anti-inflammatory cytokines IL-1ra and IL-10 and decreased the levels of proinflammatory cytokines (such as IL-6, IL-12, and TNF) in response to bacterial lipopolysaccharide (LPS) [4].
Targets(IC50)	Others

Solubility Information

Solubility	H2O: > 52.5 mg/mL,Heating is recommended. Ethanol: ≥30.67 mg/mL, DMSO: ≥23.25 mg/mL, (< 1 mg/ml refers to the product slightly soluble or insoluble)

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