

MRT67307

Catalog No: tcsc0249



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

1190378-57-4

Formula:

$C_{26}H_{36}N_6O_2$

Pathway:

Autophagy;Autophagy;NF-κB

Target:

ULK;Autophagy;IKK

Purity / Grade:

>98%

Solubility:

10 mM in DMSO

Observed Molecular Weight:

464.6

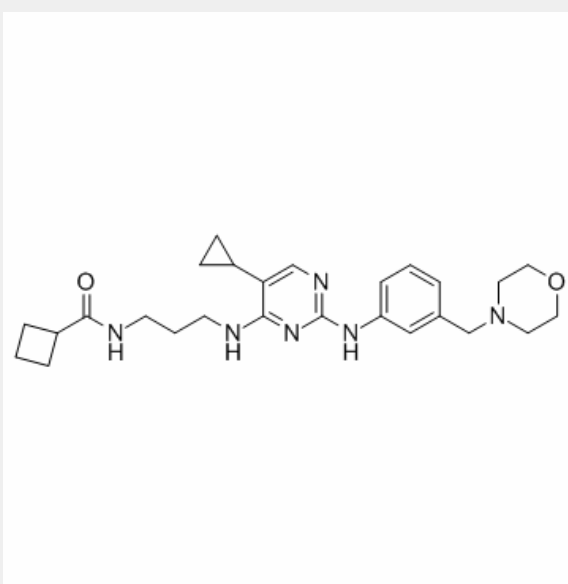
Product Description

MRT67307 is a dual inhibitor of the **IKKε** and **TBK-1**, which mediates the phosphorylation of interferon regulatory factor 3 (IRF3),

with **IC₅₀** values of 160 and 19 nM when assayed at 0.1 mM ATP in vitro, and also targets ULK1 and ULK2 with high potency (IC₅₀ values of 45 and 38 nM, respectively).

IC50 & Target: IC50: 160 nM (IKKε, ATP), 19 nM (TBK-1, ATP), 45 nM (ULK1), 38 nM (ULK2)

In Vitro: MRT67307 actually enhances phosphorylation in IKKα^{-/-} MEFs, the IL-1-stimulated phosphorylation of p105 at Ser⁹³³ and RelA at both Ser⁴⁶⁸ and Ser⁵³⁶. MRT67307 also enhances IL-1-stimulated activation of NF-κB-dependent gene transcription in wild-type MEFs. Treatment of macrophages with MRT67307 leads to an increase in the poly(I:C)- and LPS-stimulated phosphorylation of p105 and RelA and enhanced NF-κB transcriptional activity^[1]. MRT67307 (10 μM) is sufficient to reduce phospho-ATG13 to control levels, and in line with the in vitro IC₅₀ values, 10-fold less MRT68921 (1 μM) results in a similar reduction. MRT67307 and MRT68921 inhibit ULK and block autophagy in cells^[2]. MRT67307 increases IL-10 production and suppresses proinflammatory cytokine production in macrophages. MRT67307 increases CREB-dependent gene transcription by promoting the dephosphorylation of CRT3. MRT67307 does not inhibit the brain-specific kinases (BRSKs) and only inhibits the maternal embryonic leucine zipper kinase (MELK) and AMPK itself more weakly^[3].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!