Web: www.taiclone.com
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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),

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with **IC_{50}** values of 160 and 19 nM when assayed at 0.1 mM ATP in vitro, and also targets ULK1 and ULK2 with high potency (IC_{50} 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 Ser^{933} and RelA at both Ser^{468} and Ser^{536}. 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 IC_{50} 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 CRTC3. 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].