Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

YM-201636

Catalog No: tcsc0592

Available Sizes

Size: 2mg

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
371942-69-7

Formula:
$C_{25}H_{21}N_7O_3$

Pathway:
PI3K/Akt/mTOR;Autophagy;PI3K/Akt/mTOR

Target:
PI3K;Autophagy;PIKfyve

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 47 mg/mL (100.54 mM)

Observed Molecular Weight:
467.48

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Product Description

YM-201636 is a potent and selective **PIKfyve** inhibitor with an **IC_{50}** of 33 nM. YM-201636 also inhibits p110α with IC_{50} of 3.3 μM.

IC50 & Target: IC50: 33 nM (PIKfyve), 3.3 μM (p110α)[1]

In Vitro: Acute treatment of cells with YM-201636 shows that the PIKfyve pathway is involved in the sorting of endosomal transport, with inhibition leading to the accumulation of a late endosomal compartment and blockade of retroviral exit. The yeast orthologue of PIKfyve, Fab1, is found to be insensitive to YM-201636 (IC_{50}>5 μM). YM-201636 does not inhibit a type IIγ PtdInsP kinase even at 10 μM and inhibits a mouse type Iα PtdInsP kinase with an IC_{50}>2 μM[1]. YM-201636 almost completely inhibits basal and insulin-activated 2-deoxyglucose uptake at doses as low as 160 nM, with IC_{50}=54 nM for the net insulin response. YM-201636 also completely inhibits insulin-dependent activation of class IA PI 3-kinase[2]. At low doses (10-25 nM), YM-201636 inhibits preferentially PtdIns5P rather than PtdIns(3,5)P2 production, whereas at higher doses, the two products are similarly inhibited. YM-201636 at 160 nM inhibits PtdIns5P synthesis twice more effectively compared with PtdIns(3,5)P2 synthesis[3]. MDCK cells treated with YM-201636 accumulate the tight junction protein claudin-1 intracellularly. YM-201636 treatment blocks the continuous recycling of claudin-1/claudin-2 and delays epithelial barrier formation[4].