

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:

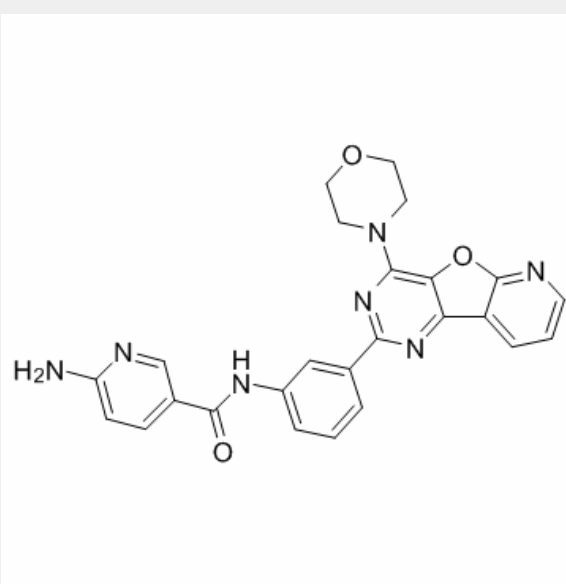
467.48

Product Description

YM-201636 is a potent and selective **PIKfyve** inhibitor with an **IC₅₀** of 33 nM. YM-201636 also inhibits p110α with IC₅₀ 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 (IC₅₀ > 5 μM). YM-201636 does not inhibit a type II γ PtdInsP kinase even at 10 μM and inhibits a mouse type Iα PtdInsP kinase with an IC₅₀ > 2 μM^[1]. YM-201636 almost completely inhibits basal and insulin-activated 2-deoxyglucose uptake at doses as low as 160 nM, with IC₅₀ = 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].



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