

# YM-201636

**Catalog No: tcsc0592**



## Available Sizes

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**Size:** 2mg

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

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**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 :  $\geq 47$  mg/mL (100.54 mM)

**Observed Molecular Weight:**

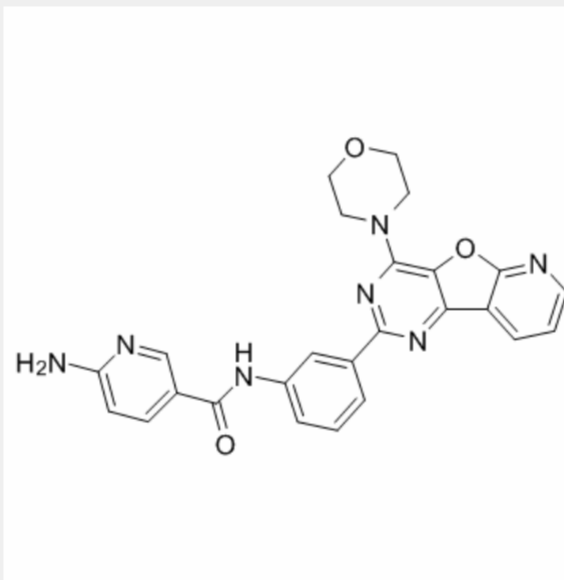
467.48

## Product Description

YM-201636 is a potent and selective **PIKfyve** inhibitor with an **IC<sub>50</sub>** of 33 nM. YM-201636 also inhibits p110α with IC<sub>50</sub> of 3.3 μM.

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

**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<sub>50</sub> > 5 μM). YM-201636 does not inhibit a type II γ PtdInsP kinase even at 10 μM and inhibits a mouse type I α PtdInsP kinase with an IC<sub>50</sub> > 2 μM<sup>[1]</sup>. YM-201636 almost completely inhibits basal and insulin-activated 2-deoxyglucose uptake at doses as low as 160 nM, with IC<sub>50</sub> = 54 nM for the net insulin response. YM-201636 also completely inhibits insulin-dependent activation of class IA PI 3-kinase<sup>[2]</sup>. At low doses (10-25 nM), YM-201636 inhibits preferentially PtdIns5P rather than PtdIns(3,5)P<sub>2</sub> 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)P<sub>2</sub> synthesis<sup>[3]</sup>. 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<sup>[4]</sup>.



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