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

Semagacestat

Catalog No: tcsc0292

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
425386-60-3

Formula:
$C_{19}H_{27}N_3O_4$

Pathway:
Neuronal Signaling;Stem Cell/Wnt;Neuronal Signaling;Stem Cell/Wnt

Target:
Amyloid-β;γ-secretase;γ-secretase;Notch

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Alternative Names:
LY450139

Observed Molecular Weight:
361.44

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Product Description

Semagacestat is a **γ-secretase** inhibitor, inhibits **β-amyloid** (**Aβ42**), **Aβ38** and **Aβ40** with **IC_{50}** of 10.9, 12 and 12.1 nM, respectively; also inhibits **Notch** signaling with **IC_{50}** of 14.1 nM.

IC50 & Target: IC50: 10.9 nM (Aβ42), 12 nM (Aβ38), 12.1 nM (Aβ40), 14.1 nM (Notch)[1]

In Vitro: Semagacestat (LY450139) reduces the secretion of Aβ42, Aβ40, and Aβ38 in 96-well-cultured media and increases β-CTF in cell lysates as expected, although this increase is unexpectedly attenuated at high concentrations[1]. In cortical neurons (CTX), Semagacestat (LY450139) causes a concentration-dependent decrease in Aβ40 secreted into the medium with IC_{50} value 111 nM for Semagacestat. Semagacestat causes a concentration-dependent decrease in Aβ40 and Aβ42 secreted into the medium with an IC_{50} value of 126 and 130 nM, respectively[2].

In Vivo: Semagacestat (LY450139) is found to decrease both Aβ42 and Aβ40 at 10 mg/kg (22-23% reduction;p[1]. The γ-secretase inhibitor, Semagacestat (LY450139), a highly potent low molecular weight compound, significantly reduces β-amyloid (Aβ) levels in cell cultures permanently over-expressing APP and in both wildtype and transgenic APP-expressing mice. Three hours following p.o. dosing of 30 mg/kg Semagacestat levels of Aβ40 are reduced by 43% (unpaired t-test, p=0.002) in the brains of wildtype C57BL/6 mice compare with vehicle treated controls. Subcutaneous administration of Semagacestat (30 mg/kg) transiently decreases the amounts of Aβ40 in the dialysate with a maximum reduction in Aβ40 levels of 80% at 3 h post-dosing (p[2].