

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

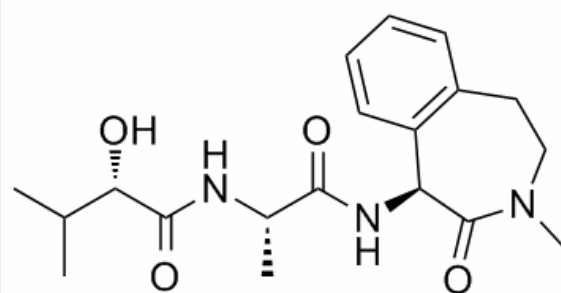
Product Description

Semagacestat is a **γ-secretase** inhibitor, inhibits **β-amyloid (Aβ42)**, **Aβ38** and **Aβ40** with **IC₅₀** of 10.9, 12 and 12.1 nM, respectively; also inhibits **Notch** signaling with **IC₅₀** 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 IC₅₀ value 111 nM for Semagacestat. Semagacestat causes a concentration-dependent decrease in Aβ40 and Aβ42 secreted into the medium with an IC₅₀ 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].



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