

# 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- $\beta$ ; $\gamma$ -secretase; $\gamma$ -secretase;Notch

**Purity / Grade:**

>98%

**Solubility:**

10 mM in DMSO

**Alternative Names:**

LY450139

**Observed Molecular Weight:**

361.44

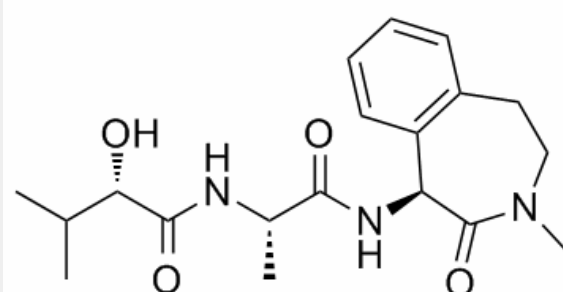
## Product Description

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

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

**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<sup>[1]</sup>. In cortical neurons (CTX), Semagacestat (LY450139) causes a concentration-dependent decrease in Aβ40 secreted into the medium with IC<sub>50</sub> value 111 nM for Semagacestat. Semagacestat causes a concentration-dependent decrease in Aβ40 and Aβ42 secreted into the medium with an IC<sub>50</sub> value of 126 and 130 nM, respectively<sup>[2]</sup>.

**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].



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