

PRODUCT INFORMATION



Semagacestat

Item No. 16713

CAS Registry No.: 425386-60-3
Formal Name: (2S)-2-hydroxy-3-methyl-N-[(1S)-1-methyl-2-oxo-2-[[[(1S)-2,3,4,5-tetrahydro-3-methyl-2-oxo-1H-3-benzazepin-1-yl]amino]ethyl]-butanamide

Synonym: LY450139

MF: C₁₉H₂₇N₃O₄

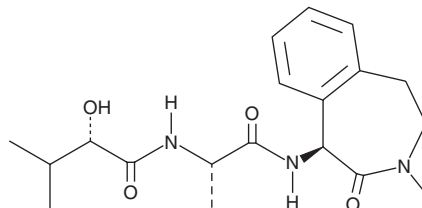
FW: 361.4

Purity: ≥95%

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Semagacestat is supplied as a crystalline solid. A stock solution may be made by dissolving the semagacestat in the solvent of choice. Semagacestat is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of semagacestat in ethanol is approximately 1 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Description

Semagacestat is a potent inhibitor of γ -secretase that blocks the production of A β 38, A β 40, and A β 42 with IC₅₀ values of 12.0, 12.1, and 10.9 nM, respectively.^{1,2} It also blocks Notch signaling (IC₅₀ = 14.1 nM).² Semagacestat modulates γ -secretase activity *in vivo*, altering A β levels in brain, cerebrospinal fluids, and plasma in a dose-dependent fashion.^{1,2} Although semagacestat does not improve cognitive status in humans, it is useful as a pan γ -secretase inhibitor for research purposes.^{2,3}

References

1. Lanz, T.A., Karmilowicz, M.J., Wood, K.M., *et al.* Concentration-dependent modulation of amyloid- β *in vivo* and *in vitro* using the γ -secretase inhibitor, LY-450139. *J. Pharmacol. Exp. Ther.* **319**(2), 924-933 (2006).
2. Mitani, Y., Yarimizu, J., Saita, K., *et al.* Differential effects between γ -secretase inhibitors and modulators on cognitive function in amyloid precursor protein-transgenic and nontransgenic mice. *J. Neurosci.* **32**(6), 2037-2050 (2012).
3. Doody, R.S., Raman, R., Farlow, M., *et al.* A phase 3 trial of semagacestat for treatment of Alzheimer's disease. *N. Engl. J. Med.* **369**(4), 341-350 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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