

PRODUCT INFORMATION



L-685,458

Item No. 14926

CAS Registry No.: 292632-98-5
Formal Name: N-[(2R,4R,5S)-5-[[[(1,1-dimethylethoxy)carbonyl]amino]-4-hydroxy-1-oxo-6-phenyl-2-(phenylmethyl)hexyl]-L-leucyl-L-phenylalaninamide

Synonym: γ -Secretase Inhibitor X

MF: C₃₉H₅₂N₄O₆

FW: 672.9

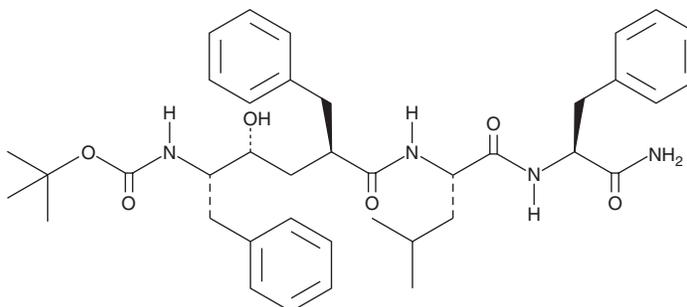
Purity: \geq 98%

Supplied as: A crystalline solid

Storage: -20°C

Stability: \geq 4 years

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



Laboratory Procedures

L-685,458 is supplied as a crystalline solid. A stock solution may be made by dissolving the L-685,458 in the solvent of choice, which should be purged with an inert gas. L-685,458 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of L-685,458 in these solvents is approximately 30 and 25 mg/ml, respectively.

Description

L-685,458 is an inhibitor of γ -secretase ($IC_{50} = 17$ nM).¹ It is selective for γ -secretase over HIV-1, cathepsin D, trypsin, HepC3 NS3, papain, and calpain I proteases (IC_{50} s = $>1,000$ nM). L-685,458 inhibits production of amyloid- β (1-40) (A β 40; Item No. 21617) and A β 42 (Item No. 20574) in Neuro2A cells transfected with human amyloid precursor protein (APP; IC_{50} s = 402 and 775 nM, respectively). It is also an inhibitor of Notch signaling that blocks hypoxia-induced activity of the Notch-responsive reporters 12xCSL and CBF1 in isolated rat intervertebral disc cells.²

References

1. Shearman, M.S., Beher, D., Clarke, E.E., *et al.* L-685,458, an aspartyl protease transition state mimic, is a potent inhibitor of amyloid β -protein precursor γ -secretase activity. *Biochemistry* **39**(30), 8698-8704 (2000).
2. Hiyama, A., Skubutyte, R., Markova, D., *et al.* Hypoxia activated the Notch signaling pathway in cells of the intervertebral disc: Implications in degenerative disc disease. *Arthritis Rheum.* **63**(5), 1355-1364 (2011).

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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