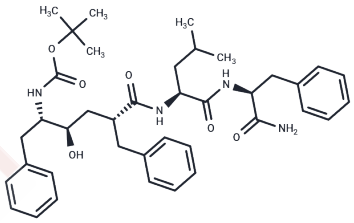
Data Sheet (Cat.No.T6870)

TargetMol

L-685458

Chemical Properties



CAS No. : 292632-98-5

Formula: C39H52N4O6

Molecular Weight: 672.85

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	L-685458 (L-685,458) is a specific and potent inhibitor of A beta PP gamma-secretase activity with Ki of 17 nM.
Targets(IC50)	Apoptosis,Gamma-secretase
In vitro	L-685,458 inhibits Aβ(40) formation in both Neuro2A and CHO cell lines overexpressing human AβPP695, and in SHSY5Y cells overexpressing the construct spβA4CTF with IC50 of 402 nM, 113 nM, and 48 nM, respectively, with the potency for reduction of Aβ(42) being about 2-fold lower. [1] In Tca8113 cells, L-685,458 inhibits cell growth by inducing G0-G1 cell cycle arrest and apoptosis. [2] In a T-cell acute lymphoblastic leukemia cell line, pre-treatment with L-685,458 enhances the anti-proliferative effect of imatinib. [3] L685,458 also significantly reduces HSV-1 replication in tissue culture by inhibiting signal peptide peptidase (SPP). [4]
Kinase Assay	HTRF Immunoassay for Aβ Quantitation: Homogeneous time-resolved fluorescence (HTRF) immunoassay methodology uses fluorescence resonance energy transfer (FRET) between two fluorophores, a donor EuK and a modified allophycocyanine pigment acceptor molecule, XL-665. When in proximity, nonradiative FRET takes place from nitrogen laser-excited EuK to XL-665, resulting in the emission of an amplified long-lived fluorescence signal. Briefly, in a typical 96-well plate assay, each well contains 0.75 nM antibody-EuK, 1.0 nM antibody-biotin, 2.0 nM SA-XL665, and 0.1?0.2 M potassium fluoride. Samples of conditioned cell culture medium or synthetic peptide standards and culture medium alone are added to give a total assay volume of 200 µL/well. Blank values are determined by the inclusion of 1.0 nM nonbiotinylated antibody in place of the biotinylated antibody. Following mixing, the reaction mixture is left at 4 °C to reach equilibrium binding, and then read on the Discovery HTRF microplate analyzer using the manufacturer's recommended settings.
Cell Research	The in vitro growth rate of Tca8113 cells treated with L-685,458, is measured by MTT. Briefly, Tca8113 cells are seeded in 96-well plates. On the day of harvest, 100 µL of spent medium is replaced with an equal volume of fresh medium containing 10% MTT 5 mg ml?1 stock. Plates are incubated at 37°C for 4 h, then 100 µl of DMSO is added to each well, and then plates are shaken at room temperature for 10 min. The absorbance is measured at 570 nm.(Only for Reference)

Solubility Information

Solubility	H2O: Insoluble, Ethanol: 6 mg/mL (8.92 mM),Sonication is recommended. DMSO: 10.1 mg/mL (15.01 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4862 mL	7.4311 mL	14.8622 mL
5 mM	0.2972 mL	1.4862 mL	2.9724 mL
10 mM	0.1486 mL	0.7431 mL	1.4862 mL
50 mM	0.0297 mL	0.1486 mL	0.2972 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Shearman MS, et al.Biochemistry. 2000 Aug 1;39(30):8698-8704.
Zhang P, et al. Genes Cancer. 2014 May;5(5-6):154-164.
Jeon JH, et al. Stem Cells Dev. 2014 Sep 1;23(17):2067-2079.

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