

**Product Name:** L-685,458

**Catalog No.:** 2627

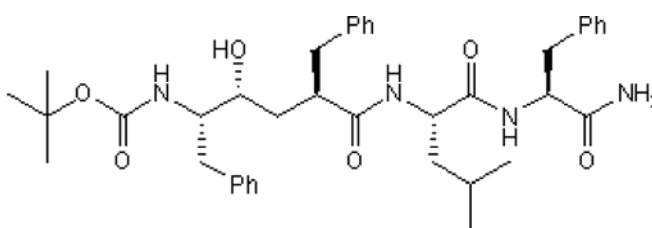
**Batch No.:** 4

CAS Number: 292632-98-5

IUPAC Name: (5S)-(tert-Butoxycarbonylamino)-6-phenyl-(4R)-hydroxy-(2R)-benzylhexanoyl)-L-leucy-L-phenylalaninamide

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>39</sub>H<sub>52</sub>N<sub>4</sub>O<sub>6</sub>  
**Batch Molecular Weight:** 672.85  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 15 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.3 (Dichloromethane:Methanol [95:5])  
**HPLC:** Shows 98.2% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	69.62	7.79	8.33
Found	69.31	7.84	8.39

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

L-685,458 is a potent and selective  $\gamma$ -secretase inhibitor ( $IC_{50}$  = 17 nM) that displays > 50-fold selectivity over a range of aspartyl, serine and cysteine proteases. L-685,458 binds with high affinity to the related aspartyl protease, signal peptide peptidase (SPP;  $K_D$  = 5.1 nM), and inhibits SPP expressed in HEK293 cells ( $IC_{50}$  = 10  $\mu$ M). L-685,458 exhibits equal potency for inhibition of A $\beta$ 40 and A $\beta$ 42 peptides ( $IC_{50}$  values are 48 and 67 nM respectively in human neuroblastoma cells). It also regulates CXCR4 and VEGFR2 expression through inhibition of Notch signaling in vitro.

**Physical and Chemical Properties:**

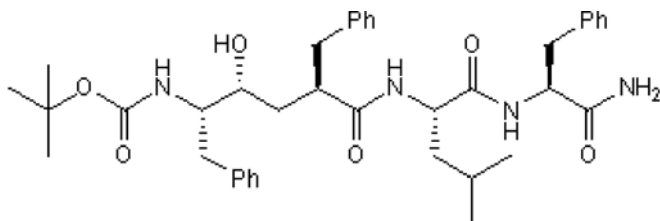
Batch Molecular Formula: C<sub>39</sub>H<sub>52</sub>N<sub>4</sub>O<sub>6</sub>

Batch Molecular Weight: 672.85

Physical Appearance: White solid

**Minimum Purity:**  $\geq$ 97%

**Batch Molecular Structure:**



**References:**

**Williams et al** (2008) Regulation of CXCR4 by the Notch ligand delta-like 4 in endothelial cells. *Cancer Res.* **68** 1889. PMID: 18339870.

**Iben et al** (2007) Signal peptide peptidase and gamma-secretase share equivalent inhibitor binding pharmacology. *J.Biol.Chem.* **282** 36829. PMID: 17932033.

**Williams et al** (2006) Up-regulation of the Notch ligand delta-like 4 inhibits VEGF-induced endothelial cell function. *Blood* **107** 931. PMID: 16219802.

**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 15 mM

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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