

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

**Catalog No.:** 2627

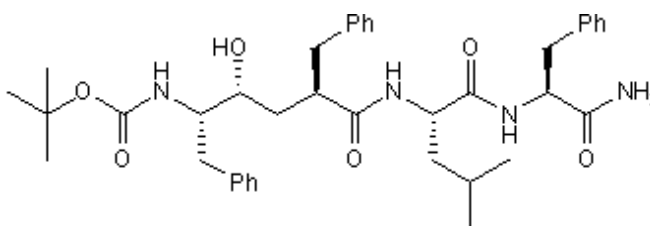
**Batch No.:** 4

CAS Number: 292632-98-5

IUPAC Name: (5*S*)-(tert-Butoxycarbonylamino)-6-phenyl-(4*R*)-hydroxy-(2*R*)-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

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**Description:**

Potent and selective  $\gamma$ -secretase inhibitor ( $IC_{50}$  = 17 nM) that displays > 50-fold selectivity over a range of aspartyl, serine and cysteine proteases. 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). Also regulates CXCR4 and VEGFR2 expression through inhibition of Notch signaling in vitro.

**Physical and Chemical Properties:**

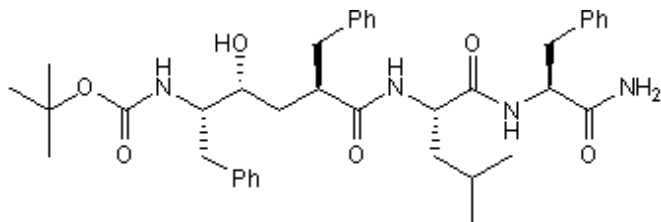
Batch Molecular Formula: C<sub>39</sub>H<sub>52</sub>N<sub>4</sub>O<sub>6</sub>

Batch Molecular Weight: 672.85

Physical Appearance: White solid

**Minimum Purity:** >97%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 15 mM

**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.

**References:**

**Shearman et al** (2000) L-685,458, an aspartyl protease transition state mimic, is a potent inhibitor of amyloid- $\beta$ -protein precursor  $\gamma$ -secretase activity. *Biochemistry* **39** 8698. PMID: 10913280.

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

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

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