

# PRODUCT INFORMATION



**LY411575**

Item No. 16162

**CAS Registry No.:** 209984-57-6  
**Formal Name:** N-[(1S)-2-[[[(7S)-6,7-dihydro-5-methyl-6-oxo-5H-dibenz[b,d]azepin-7-yl]amino]-1-methyl-2-oxoethyl]-3,5-difluoro- $\alpha$ S-hydroxy-benzeneacetamide

**MF:** C<sub>26</sub>H<sub>23</sub>F<sub>2</sub>N<sub>3</sub>O<sub>4</sub>

**FW:** 479.5

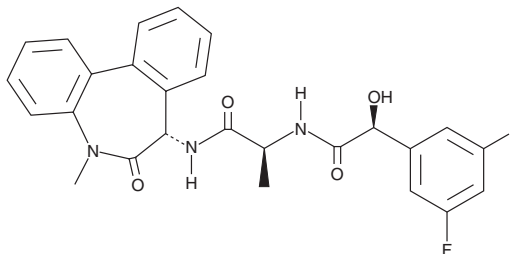
**Purity:** ≥98%

**UV/Vis.:**  $\lambda_{\text{max}}$ : 233 nm

**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

LY411575 is supplied as a crystalline solid. A stock solution may be made by dissolving the LY411575 in the solvent of choice, which should be purged with an inert gas. LY411575 is soluble in the organic solvent dimethyl formamide at a concentration of approximately 10 mg/ml. LY411575 is also slightly soluble in ethanol and DMSO.

## Description

$\gamma$ -Secretase is a multi-subunit aspartyl protease that regulates signaling pathways by proteolytically cleaving substrates, abrogating or releasing signaling molecules. One well-known substrate of this enzyme is Notch, a transmembrane receptor that plays a key role in cell fate decisions including cell proliferation, differentiation, and apoptosis. LY411575 is a cell-permeable  $\gamma$ -secretase inhibitor (IC<sub>50</sub> = 0.14 nM) that has been shown to block Notch activation *in vitro* at 500  $\mu$ M.<sup>1,2</sup> LY411575 can induce apoptosis in Kaposi's sarcoma cells as well as promote intestinal goblet cell differentiation in a mouse model of colitis.<sup>2,3</sup> It has also been observed to promote neural differentiation of mouse embryonic stem cells.<sup>4</sup>

## References

1. Czirr, E., Leuchtenberger, S., Dorner-Ciossek, C., *et al.* Insensitivity to A $\beta$ 42-lowering nonsteroidal anti-inflammatory drugs and  $\gamma$ -secretase inhibitors is common among aggressive presenilin-1 mutations. *J. Bio. Chem.* **282(34)**, 24504-24513 (2007).
2. Curry, C.L., Reed, L.L., Golde, T.E., *et al.* Gamma secretase inhibitor blocks Notch activation and induces apoptosis in Kaposi's sarcoma tumor cells. *Oncogene* **24(42)**, 6333-6344 (2005).
3. Okamoto, R., Tsuchiya, K., Nemoto, Y., *et al.* Requirement of Notch activation during regeneration of the intestinal epithelia. *Am. J. Physiol. Gastrointest. Liver Physiol.* **296(1)**, G23-G35 (2009).
4. Abranches, E., Silva, M., Pradier, L., *et al.* Neural differentiation of embryonic stem cells *in vitro*: A road map to neurogenesis in the embryo. *PLoS One* **4(7)**, e6286 (2009).

### 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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