

# PRODUCT INFORMATION



## β-Secretase Inhibitor IV

Item No. 23388

**CAS Registry No.:** 797035-11-1  
**Formal Name:** N<sup>1</sup>-[(1S,2R)-3-(cyclopropylamino)-2-hydroxy-1-(phenylmethyl)propyl]-5-[methyl(methylsulfonyl)amino]-N<sup>3</sup>-[(1R)-1-phenylethyl]-1,3-benzenedicarboxamide

**MF:** C<sub>31</sub>H<sub>38</sub>N<sub>4</sub>O<sub>5</sub>S

**FW:** 578.7

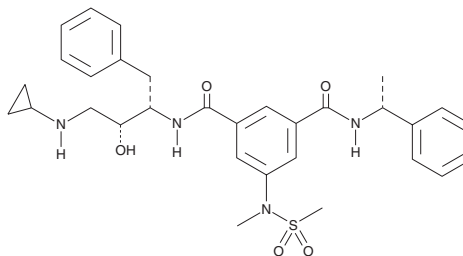
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 204 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

β-Secretase inhibitor IV is supplied as a crystalline solid. A stock solution may be made by dissolving the β-secretase inhibitor IV in the solvent of choice, which should be purged with an inert gas. β-Secretase inhibitor IV is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of β-secretase inhibitor IV in ethanol is approximately 10 mg/ml and approximately 20 mg/ml in DMSO and DMF.

### Description

β-Secretase inhibitor IV is an inhibitor of β-site amyloid protein cleaving enzymes (BACE/β-secretase) 1 and 2 (IC<sub>50</sub>s = 15 and 230 nM for human BACE1 and 2, respectively).<sup>1</sup> It has >500-fold selectivity for BACE1 and 2 over the aspartyl proteases renin and cathepsin D. β-Secretase inhibitor IV inhibits secretion of amyloid-β (Aβ) precursor protein (APP; IC<sub>50</sub> = 29 nM) in HEK293T cells transfected with a truncated APP. It also inhibits formation of the Aβ peptides Aβ38, Aβ40, and Aβ42 in primary chick neurons (IC<sub>50</sub>s = 3.7, 4.7, and 4.8 nM, respectively).<sup>2</sup>

### References

1. Stachel, S.J., Coburn, C.A., Steele, T.G., *et al.* Structure-based design of potent and selective cell-permeable inhibitors of human β-secretase (BACE-1). *J. Med. Chem.* **47(26)**, 6447-6450 (2004).
2. Czvitkovich, S., Duller, S., Mathiesen, E., *et al.* Comparison of pharmacological modulation of APP metabolism in primary chicken telencephalic neurons and in a human neuroglioma cell line. *J. Mol. Neurosci.* **43(3)**, 257-267 (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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