Beta-secretase
BACE; β-Secretase

Beta-secretase (BACE) is an aspartic-acid protease important in the formation of myelin sheaths in peripheral nerve cells. The transmembrane protein contains two active site aspartate residues in its extracellular protein domain and may function as a dimer. Alzheimer's disease (AD) is caused by aggregates of the amyloid peptide (Abeta), which is generated by cleavage of the Abeta protein precursor (APP) by beta-secretase (BACE-1) followed by gamma-secretase. BACE-1 cleavage is limiting for the production of Abeta, Drugs to block this enzyme (BACE inhibitors) prevent the build up of beta-amyloid and may help slow or stop Alzheimers disease.
Beta-secretase Inhibitors

**Aloeresin D**  
Cat. No.: HY-N2215  
Aloeresin D is a chromone glycoside isolated from Aloe vera, inhibits β-Secretase (BACE1) activity, with an IC\(_{50}\) of 39 μM.  
Purity: >98%  
Clinical Data: No Development Reported  
Size: 1 mg, 5 mg

**AZD3839 free base**  
Cat. No.: HY-13438  
AZD3839 (free base) is a potent and selective BACE1 inhibitor with IC\(_{50}\) of 23.6 μM, about 14-fold selectivity over BACE2, also a β-secretase enzyme inhibitor.  
Purity: 99.99%  
Clinical Data: Phase 1  
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

**BACE-1 inhibitor 1**  
Cat. No.: HY-112297  
BACE-1 inhibitor 1 (Compound 8a) is a potent BACE-1 inhibitor with an IC\(_{50}\) of 56 nM.  
Purity: >98%  
Clinical Data: No Development Reported  
Size: 100 mg, 250 mg, 500 mg

**BACE-IN-1**  
Cat. No.: HY-U00287  
BACE-IN-1 (Compound 13) is a substituted Imidazo[1,2-a]pyridine derivative which can inhibit β-site amyloid precursor protein-cleaving enzyme (BACE) and that may be useful in the treatment of diseases in which BACE is involved, such as Alzheimer’s disease.  
Purity: >98%  
Clinical Data: No Development Reported  
Size: 1 mg, 5 mg, 10 mg, 20 mg

**BACE1-IN-1**  
Cat. No.: HY-100182  
BACE1-IN-1 is a potent and highly brain penetrant BACE1 inhibitor with IC\(_{50}\)s of 32 and 47 nM for human BACE1 and BACE2, respectively.  
Purity: >98%  
Clinical Data: No Development Reported  
Size: 1 mg, 5 mg, 10 mg

**BACE1-IN-2**  
Cat. No.: HY-112444  
BACE1-IN-2 is a 1,4-Oxazine β-Secretase 1 (BACE1) inhibitor with an IC\(_{50}\) of 22 nM.  
Purity: >98%  
Clinical Data: No Development Reported  
Size: 250 mg, 500 mg

**BACE1-IN-4**  
Cat. No.: HY-128594  
BACE1-IN-4 is a potent and highly selective BACE1 inhibitor, with an IC\(_{50}\) of 3.8 nM and a K\(_i\) of 1.9 nM, more selective at BACE1 over BACE2. Anti-Alzheimer’s disease.  
Purity: >98%  
Clinical Data: No Development Reported  
Size: 100 mg, 250 mg, 500 mg

**Elenbecstat (E2609)**  
Cat. No.: HY-109055  
Elenbecstat (E2609) is a novel potent BACE-1 inhibitor for the treatment of Alzheimer’s disease (AD).  
Purity: >98%  
Clinical Data: No Development Reported  
Size: 250 mg, 500 mg

**Epiberberine**  
Cat. No.: HY-N0226  
Epiberberine is an alkaloid isolated from Coptis chinensis, acts as a potent AChE and BChE inhibitor, and a non-competitive BACE1 inhibitor, with IC\(_{50}\)s of 1.07, 6.03 and 8.55 μM, respectively.  
Purity: >98%  
Clinical Data: No Development Reported  
Size: 5 mg, 10 mg, 50 mg

**Epiberberine chloride**  
Cat. No.: HY-N0226A  
Epiberberine chloride is an alkaloid isolated from Coptis chinensis, acts as a potent AChE and BChE inhibitor, and a non-competitive BACE1 inhibitor, with IC\(_{50}\)s of 1.07, 6.03 and 8.55 μM, respectively.  
Purity: 99.60%  
Clinical Data: No Development Reported  
Size: 10 mM × 1 mL, 5 mg, 10 mg
Eslicarbazepine acetate (BIA 2-093)

Cat. No.: HY-80703

Eslicarbazepine acetate, an antiepileptic drug, is a dual inhibitor of β-Secretase and voltage-gated sodium channel.

Purity: 99.98%
Clinical Data: Launched
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 500 mg

Glabrolide

Cat. No.: HY-N4186

Glabrolide, derived from Glycyrrhiza uralensis Fisch., is a β-secretase 1 (BACE-1) inhibitor.

Purity: >98%
Clinical Data: No Development Reported
Size: 100 mg, 250 mg, 500 mg

Lanabecestat (AZD3293; LY3314814)

Cat. No.: HY-100740

Lanabecestat (AZD3293) is a potent, highly permeable, orally active and blood-brain barrier penetrating BACE1 inhibitor with a Ki of 0.4 nM.

Purity: 99.76%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg

LY2811376

Cat. No.: HY-10472

LY2811376 is the first orally available non-peptidic β-secretase (BACE1) inhibitor with an IC50 of 239 nM-249 nM, that acts to decrease Aβ secretion with EC50 of 300 nM, and demonstrates to have 10-fold selectivity towards BACE1 over BACE2, and more than 50-fold inhibition over... Purity: 99.79%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

PF-06751979

Cat. No.: HY-112157

PF-06751979 is a potent, brain penetrant, β-site amyloid precursor protein cleaving enzyme 1 (BACE1) inhibitor with an IC50 of 7.3 nM in BACE1 binding assay.

Purity: 99.00%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Umibecestat (CNP520)

Cat. No.: HY-119689

Umibecestat (CNP520) is a β-site amyloid precursor protein cleaving enzyme-1 (BACE-1) inhibitor with IC50 of 11 nM and 10 nM for human BACE-1 and mouse BACE-1, respectively.

Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Verubecestat (MK-8931)

Cat. No.: HY-16759

Verubecestat (MK-8931) is a β-secretase 1 (BACE1) inhibitor under investigation for the treatment of Alzheimer’s Disease.

Purity: 99.79%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

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β-Secretase Inhibitor IV
(Axon 1125)

Cat. No.: HY-10133

β-Secretase Inhibitor IV is a potent, cell-active BACE-1 inhibitor with IC₅₀'s of 15.6 and 16.3nM under BACE-1 concentrations of 2 nM and 100 pM, respectively.

Purity: >98%
Clinical Data: No Development Reported
Size: 250 mg, 500 mg