Beta-secretase

BACE; β-Secretase

Beta-secretase (BACE) is a transmembrane aspartic proteinase responsible for cleaving the amyloid precursor protein (APP) to generate the soluble ectodomain sAPPbeta and its C-terminal fragment CTFbeta. BACE is a major target of Alzheimer's disease (AD) therapeutics. There are two forms of the enzyme: BACE1 and BACE2.

Deposition of amyloid-β protein (Aβ) to form neuritic plaques is the characteristic neuropathology of Alzheimer's disease (AD). Aβ is generated from APP by β- and γ-secretase cleavages. BACE1 is the β-secretase and its inhibition induces severe side effects, whereas its homolog BACE2 normally suppresses Aβ by cleaving APP/Aβ at the θ-site (Phe20) within the Aβ domain.

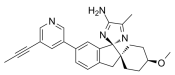
Beta-secretase Inhibitors

(1α,1'S,4β)-Lanabecestat

((1α,1'S,4β)-AZD3293; (1α,1'S,4β)-LY3314814)

Cat. No.: HY-100740C

(1α,1'S,4β)-Lanabecestat ((1α,1'S,4β)-AZD3293) a less active enantiomer of Lanabecestat. Lanabecestat is a potent, orally active and blood-brain barrier penetrating BACE1 inhibitor with a K_i of 0.4 nM.



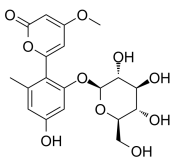
Purity: 97.20%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Aloenin

(Aloenin A)

Cat. No.: HY-N0495

Aloenin (Aloenin A) is a natural compound, which has potent peroxyl radical-scavenging activities and moderate inhibitory active on **β-secretase (BACE)**.

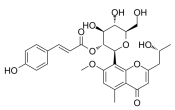


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

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.

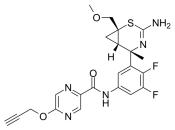


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

AM-6494

Cat. No.: HY-128774

AM-6494 is a potent and orally active **BACE1** (efficacious β-site amyloid precursor protein cleaving enzyme 1) inhibitor (IC_{50}=0.4 nM) with in vivo selectivity over BACE2 (IC_{50}=18.6 nM).



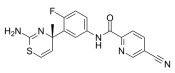
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Atabecestat

(JNJ-54861911)

Cat. No.: HY-109052

Atabecestat (JNJ-54861911) is a potent brain-penetrant and orally active **β-site amyloid precursor protein cleaving enzyme 1 (BACE1)** inhibitor, achieves robust and high CSF Aβ reduction.

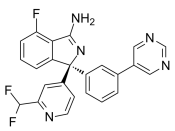


Purity: 98.76%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

AZD3839 free base

Cat. No.: HY-13438

AZD3839 free base is a potent and selective orally active, brain-permeable **BACE1** inhibitor (K_i=26 nM). AZD3839 free base shows 14 and >1000-fold selectivity against BACE2 and cathepsin D, respectively.

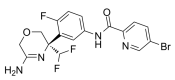


Purity: 99.98%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

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.

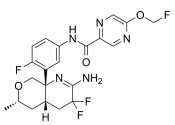


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

BACE-1 inhibitor 2

Cat. No.: HY-131068

BACE-1 inhibitor 2 is a potent and CNS permeable **BACE-1** inhibitor with an IC_{50} of 1.5 nM in BACE-1 enzymatic assay.

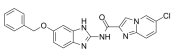


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

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.

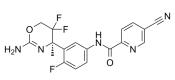


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

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.



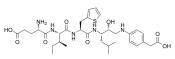
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Tel: 609-228-6898 Fax: 609-228-5909 Email: sales@MedChemExpress.com

BACE1-IN-10

Cat. No.: HY-P3426

BACE1-IN-10 is a potent **BACE1** Inhibitor. BACE1-IN-10 shows sub-micromolar activity against recombinant BACE1 (rBACE1).

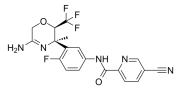


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

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.

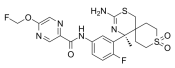


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

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.

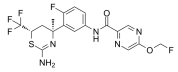


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

BACE1-IN-5

Cat. No.: HY-130244

BACE1-IN-5 (Compound 15) is a **β-site amyloid precursor protein cleaving enzyme 1 (BACE1)** inhibitor with an IC_{50} of 9.1 nM, and also inhibits cellular **amyloid-β (Aβ)** with an IC_{50} of 0.82 nM. BACE1-IN-5 has a medicinal chemistry that improves hERG inhibition and P-gp efflux.

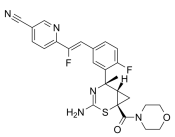


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

BACE1-IN-6

Cat. No.: HY-145345

BACE1-IN-6 is a **BACE1** inhibitor with an IC_{50} value of 1.5 nM.

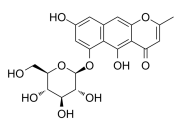


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Cassiaside

Cat. No.: HY-N7887

Cassiaside is a naphthopyrone glucoside, shows mixed-type inhibition against **BACE1** (IC_{50}=4.45 μM; K_i=9.85 μM). Cassiaside possesses potential anti- Alzheimer's disease (AD) activity.



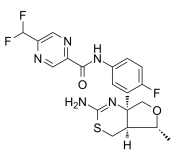
Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg

Elenbecestat

(E2609)

Cat. No.: HY-109055

Elenbecestat (E2609) is a potent, orally bioavailable and CNS-penetrant **BACE-1** inhibitor. Elenbecestat has the potential for Alzheimer's disease (AD) research.

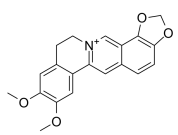


Purity: 99.77%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

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.

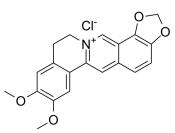


Purity: 98.46%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg

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.



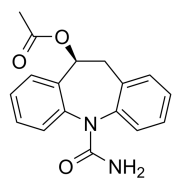
Purity: 99.03%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

Eslicarbazepine acetate

(BIA 2-093)

Cat. No.: HY-B0703

Eslicarbazepine acetate (BIA 2-093), an antiepileptic drug, is a dual a dual Inhibitor of **β-Secretase** and voltage-gated **sodium channel**.

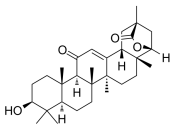


Purity: 99.98%
Clinical Data: Launched
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 500 mg

Glabrolide

Cat. No.: HY-N4186

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

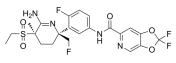


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg

JNJ-67569762

Cat. No.: HY-132895

JNJ-67569762 is a selective **BACE1** inhibitor targeting the S3 pocket (IC_{50} = 2.7 nM).

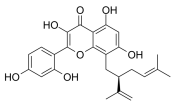


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Kushenol C

Cat. No.: HY-108966

Kushenol C, isolated from the roots of Sophora flavescens, shows anti-Inflammatory and anti-oxidative stress activities. Kushenol C inhibits **BACE1 (β-site APP cleaving enzyme 1)** with an IC_{50} of 5.45 μM.



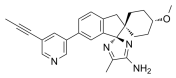
Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg

Lanabecestat

(AZD3293; LY3314814)

Cat. No.: HY-100740

Lanabecestat (AZD3293) is a potent, orally active and blood-brain barrier penetrating **BACE1** inhibitor with a K_i of 0.4 nM. Lanabecestat is used for the research of Alzheimer's disease.

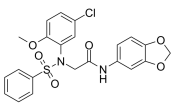


Purity: 99.82%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg

LX2343

Cat. No.: HY-111383

LX2343 is a **BACE1** enzyme inhibitor with an IC_{50} value of 11.43±0.36 μM. LX2343 acts as a non-ATP competitive **PI3K** inhibitor with an IC_{50} of 15.99±3.23 μM. LX2343 stimulates **autophagy** in its promotion of **Aβ** clearance.

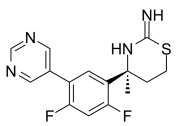


Purity: 99.80%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

LY2811376

Cat. No.: HY-10472

LY2811376 is the first orally available non-peptidic **β-secretase (BACE1)** inhibitor with IC_{50} of 239 nM-249 nM, that acts to decrease Aβ secretion with EC_{50} of 300 nM, and demonstrates to have 10-fold selectivity towards BACE1 over BACE2, and more than 50-fold inhibition over...

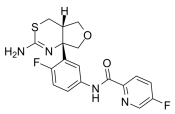


Purity: 99.88%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

LY2886721

Cat. No.: HY-13240

LY2886721 is a potent, selective and orally active **beta-site amyloid precursor protein cleaving enzyme 1 (BACE1)** inhibitor with an IC_{50} of 20.3 nM for recombinant human **BACE1**.

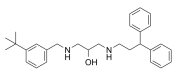


Purity: 99.92%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Multitarget AD inhibitor-1

Cat. No.: HY-136813

Multitarget AD inhibitor-1 is a selective and reversible **butyrylcholinesterase (BuChE)** inhibitor with IC_{50}s of 7.22 μM and 1.55 μM for hBuChE and eqBuChE (BuChE from equine serum), respectively.

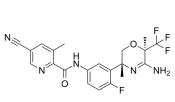


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

NB-360

Cat. No.: HY-124322

NB-360 is a potent, brain penetrable, and orally bioavailable dual **BACE1/BACE2** inhibitor (IC_{50}: mouse and human BACE1=5 nM; BACE2=6 nM).

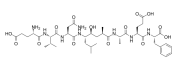


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

OM99-2

Cat. No.: HY-P2713

OM99-2, an eight residue peptidomimetic, tight-binding inhibitor of human brain memapsin 2 with a K_i value of 9.58 nM. OM99-2 is significantly advanced the development of BACE1 inhibitor. OM99-2 has the potential for the research of the Alzheimer's disease.

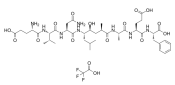


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

OM99-2 TFA

Cat. No.: HY-P2713A

OM99-2 TFA, an eight residue peptidomimetic, tight-binding inhibitor of human brain memapsin 2 with a K_i value of 9.58 nM. OM99-2 TFA is significantly advanced the development of BACE1 inhibitor. OM99-2 has the potential for the research of the Alzheimer's disease.

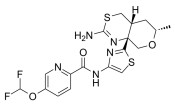


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

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 IC_{50} of 7.3 nM in BACE1 binding assay.



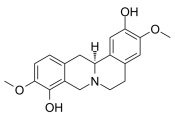
Purity: 99.40%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Scoulerine

((-)-Scoulerine; Discretamine)

Cat. No.: HY-N1255

Scoulerine ((-)-Scoulerine), an isoquinoline alkaloid, is a potent **antimitotic** compound. Scoulerine is also an inhibitor of **BACE1** (β-site amyloid precursor protein cleaving enzyme 1). Scoulerine inhibits proliferation, arrests cell cycle, and induces apoptosis in cancer cells.

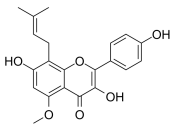


Purity: 99.27%
Clinical Data: No Development Reported
Size: 1 mg

Sophoflavescenol

Cat. No.: HY-N2284

Sophoflavescenol is a prenylated flavonol, which shows great inhibitory activity with **IC_{50}** of 0.013 μM against **Phosphodiesterase 5 (PDE5)**, and also inhibits RLAR, HRAR, AGE, BACE1, AChE and BChE with IC_{50}s of 0.30 μM, 0.17 μM, 17.89 μg/mL, 10.98 μM, 8.37 μM and 8.21 μM, respectively.

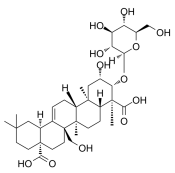


Purity: 98.15%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Tenuifolin

Cat. No.: HY-N0702

Tenuifolin is a triterpene isolated from Polygala tenuifolia Willd, has neuroprotective effects. Tenuifolin reduces Aβ secretion by inhibiting **β-secretase**.



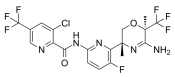
Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 20 mg

Umibecestat

(CNP520)

Cat. No.: HY-119689

Umibecestat (CNP520) is a **beta-site amyloid precursor protein cleaving enzyme-1 (BACE-1)** inhibitor with **IC_{50}**s of 11 nM and 10 nM for human BACE-1 and mouse BACE-1, respectively. Umibecestat can be used for the research of alzheimer's disease.



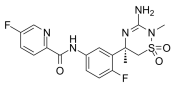
Purity: >98%
Clinical Data: Phase 3
Size: 1 mg, 5 mg

Verubecestat

(MK-8931)

Cat. No.: HY-16759

Verubecestat (MK-8931) is an orally active, high-affinity **BACE1** and **BACE2** inhibitor with **K_i** values of 2.2 nM and 0.38 nM. Verubecestat effectively reduces Aβ40 and has the potential for Alzheimer's Disease.

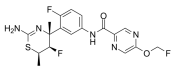


Purity: 99.69%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

β-Secretase Inhibitor I

Cat. No.: HY-126548

β-Secretase Inhibitor I is an extremely potent **β-secretase** inhibitor with reduced cardiovascular and liver toxicity.

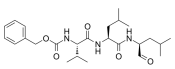


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

β-Secretase Inhibitor II

Cat. No.: HY-136736

β-Secretase Inhibitor II is a **β-Secretase** inhibitor. β-Secretase Inhibitor II is a simple tripeptide aldehyde (**IC_{50}**=700 nM for inhibition of total **Aβ** and **IC_{50}**=2.5 μM for **$Aβ_{1-42}$**). β-Secretase Inhibitor II can be used for the research of Alzheimer's disease.

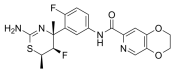


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

β-Secretase Inhibitor III

Cat. No.: HY-139720

β-Secretase Inhibitor III is an extremely selective **BACE1** inhibitor (**K_i** = 0.13 nM).

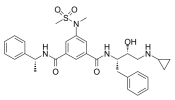


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

β-Secretase Inhibitor IV

Cat. No.: HY-10133

β-Secretase Inhibitor IV is a potent, cell-active **BACE-1** inhibitor with IC_{50}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: 1 mg, 5 mg