Glucosidase

Glucosidases are glycoside hydrolase enzymes. α-glucosidase is a glucosidase located in the brush border of the small intestine that acts upon α(14) bonds. α-Glucosidase inhibitor is a new type of antidiabetics. By reducing the postprandial blood sugar concentration, it can effectively control the blood sugar levels, thereby reducing the occurrence of diabetic complications.

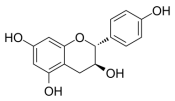
β-glucosidase catalyzes the hydrolysis of the glycosidic bonds to terminal non-reducing residues in β-D-glucosides and oligosaccharides, with release of glucose. β-Glucosidase has attracted substantial attention in the scientific community because of its pivotal role in cellulose degradation, glycoside transformation and many other industrial processes. β-glucosidases catalyze the final step of cellulose hydrolysis and are essential in cellulose degradation.

Glucosidase Inhibitors & Activators

(+)-Afzelechin

Cat. No.: HY-N2821

(+)-Afzelechin, isolated from rhizomes of Bergenia ligulata, is an **alpha-glucosidase** activity inhibitor with an ID_{50} (50% inhibition dose) value of 0.13 mM. (+)-Afzelechin can delay the absorption of carbohydrates in food to suppress postprandial hyperglycemia and hyperinsulinemia.



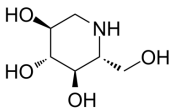
Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg

1-Deoxynojirimycin

(Duvoglustat)

Cat. No.: HY-14860

1-Deoxynojirimycin (Duvoglustat) is a potent and orally active **α-glucosidase** inhibitor. 1-Deoxynojirimycin suppresses postprandial blood glucose and is widely used for diabetes mellitus. 1-Deoxynojirimycin possesses antihyperglycemic, anti-obesity, and antiviral features.



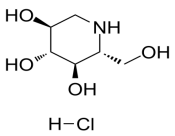
Purity: >98.0%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

1-Deoxynojirimycin hydrochloride

(Duvoglustat hydrochloride)

Cat. No.: HY-14860A

1-Deoxynojirimycin hydrochloride (Duvoglustat hydrochloride) is a potent and orally active **α-glucosidase** inhibitor. 1-Deoxynojirimycin hydrochloride suppresses postprandial blood glucose and is widely used for diabetes mellitus.



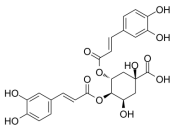
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

3,4-Dicaffeoylquinic acid

(3,4-Di-O-caffeoylquinic acid; Isochlorogenic acid B)

Cat. No.: HY-N0057

3,4-Dicaffeoylquinic acid (3,4-Di-O-caffeoylquinic acid), naturally isolated from Laggera alata, has antioxidative, DNA protective, neuroprotective and hepatoprotective properties.

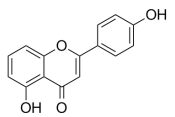


Purity: 96.44%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg

4',5-Dihydroxyflavone

Cat. No.: HY-N1881

4',5-Dihydroxyflavone is a **soybean LOX-1** and **yeast α-Glucosidase** inhibitor, with an K_i of 102.6 μM for soybean LOX-1 and an IC_{50} of 66 μM for yeast α-glucosidase. LOX-1 isshort for Lectin-like oxidized low-density lipoprotein receptor-1.



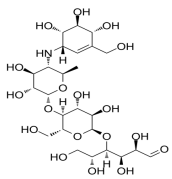
Purity: 95.75%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 100 mg

Acarbose

(BAY g 5421)

Cat. No.: HY-B0089

Acarbose (BAY g 5421), antihyperglycemic agent, is an orally active **alpha-glucosidase** inhibitor (IC_{50}=11 nM). Acarbose can potentiate the hypoglycemic effects of sulfonylureas or insulin.



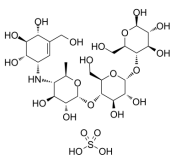
Purity: >98.0%
Clinical Data: Launched
Size: 10 mM × 1 mL, 200 mg, 1 g

Acarbose sulfate

(Bay-g 5421 sulfate)

Cat. No.: HY-B0089A

Acarbose (BAY g 5421) sulfate, antihyperglycemic agent, is an orally active **alpha-glucosidase** inhibitor (IC_{50}=11 nM). Acarbose sulfate can potentiate the hypoglycemic effects of sulfonylureas or insulin.



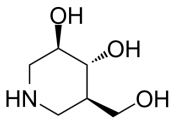
Purity: >98%
Clinical Data: Launched
Size: 1 mg, 5 mg

Afegostat

(D-Isofagomine; Isofagomine)

Cat. No.: HY-14829

Afegostat is a pharmacological chaperone, which specifically and reversibly binds acid-β-glucosidase (**GCase**) in the endoplasmic reticulum (ER) with high affinity.



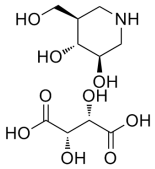
Purity: >98%
Clinical Data: Phase 2
Size: 1 mg, 5 mg

Afegostat D-Tartrate

(D-Isofagomine D-Tartrate; Isofagomine D-Tartrate)

Cat. No.: HY-14829E

Afegostat D-Tartrate is a pharmacological chaperone, which specifically and reversibly binds acid-β-glucosidase (**GCase**) in the endoplasmic reticulum (ER) with high affinity.



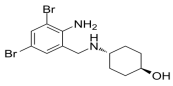
Purity: >98.0%
Clinical Data: Phase 2
Size: 5 mg, 25 mg

Ambroxol

(NA-872)

Cat. No.: HY-B1039

Ambroxol (NA-872), an active metabolite of the prodrug Bromhexine, has potent expectorant effects. Ambroxol is a **glucocerebrosidase (GCase)** chaperone and increases glucocerebrosidase activity.



Purity: 99.83%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg

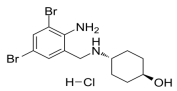
Tel: 609-228-6898 Fax: 609-228-5909 Email: sales@MedChemExpress.com

Ambroxol hydrochloride

(NA-872 hydrochloride)

Cat. No.: HY-B1039A

Ambroxol hydrochloride (NA-872 hydrochloride), an active metabolite of the prodrug Bromhexine, has potent expectorant effects. Ambroxol hydrochloride is a **glucocerebrosidase (GCase)** chaperone and increases glucocerebrosidase activity.

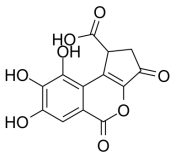


Purity: >98.0%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg

Brevifolincarboxylic acid

Cat. No.: HY-N4095

Brevifolincarboxylic acid is extracted from Polygonum capitatum, has inhibitory effect on the aryl hydrocarbon receptor (**AhR**). Brevifolincarboxylic acid is an **α-glucosidase** inhibitor with an IC_{50} of 323.46 μM.

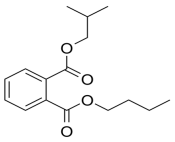


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Butyl isobutyl phthalate

Cat. No.: HY-N7377

Butyl isobutyl phthalate is isolated from the rhizoid of Laminaria japonica. Butyl isobutyl phthalate is a non-competitive **α-glucosidase** inhibitor with an IC_{50} value of 38 μM. Butyl isobutyl phthalate shows a hypoglycemic effect and has the potential for diabetes treatment.

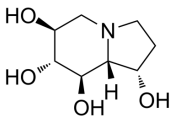


Purity: 98.77%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 50 mg, 100 mg

Castanospermine

Cat. No.: HY-N2022

Castanospermine inhibits all forms of α- and β-glucosidases, especially glucosidase I (required for glucoprotein processing by transfer of mannose and glucose from asparagine-linked lipids). targetα- and β-glucosidases.

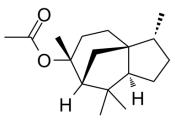


Purity: >98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

Cedryl acetate

Cat. No.: HY-W009417

Cedryl acetate is a tricyclic sesquiterpene isolated from the plant Psidium caudatum. Cedryl acetate shows α-glucosidase inhibitory activity.

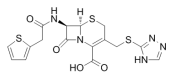


Purity: >98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 100 mg

Cefetrizole

Cat. No.: HY-U00266

Ceftezole is an **α-Glucosidase** inhibitor with an IC_{50} and a K_i of 2.1 μM and 0.578 μM, respectively.



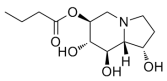
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Celgosivir

(MBI 3253; MDL 28574; MX3253)

Cat. No.: HY-16134

Celgosivir (MBI 3253; MDL 28574; MX3253) is an **α-glucosidase I** inhibitor; inhibits bovine viral diarrhoea virus (BVDV) with an IC_{50} of 1.27 μM in in vitro assay.

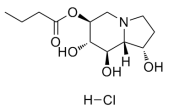


Purity: >98%
Clinical Data: Phase 2
Size: 1 mg, 5 mg

Celgosivir hydrochloride (MBI 3253 hydrochloride; MDL 28574 hydrochloride; MX3253 hydrochloride)

Cat. No.: HY-16134A

Celgosivir hydrochloride (MBI 3253 hydrochloride; MDL 28574 hydrochloride; MX3253 hydrochloride) is an **α-glucosidase I** inhibitor; inhibits bovine viral diarrhoea virus (BVDV) with an IC_{50} of 1.27 μM in in vitro assay.

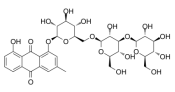


Purity: >98.0%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

Chrysophanol triglucoside

Cat. No.: HY-N7599

Chrysophanol triglucoside is an anthraquinone isolated from Cassia obtusifolia, inhibits **protein tyrosine phosphatases 1B (PTP1B)** and **α-glucosidase** with IC_{50}s of 80.17 and 197.06 μM, respectively. Chrysophanol triglucoside has the potential for diabetes research.

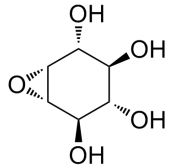


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg

Conduritol B epoxide

Cat. No.: HY-100944

Conduritol B epoxide is an irreversible covalently bound **acid β-glucosidase (GCase)** inhibitor.

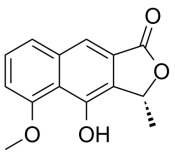


Purity: >98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Eleutherol

Cat. No.: HY-N7626

Eleutherol is a naphthalene isolated from E. americana with **antifungal** activities. Eleutherol is against yeasts Candida albicans, C. tropicalis, Saccharomyces cerevisiae and Cryptococcus neoformans with **MIC** values between 7.8 μg/mL and 250 μg/mL.

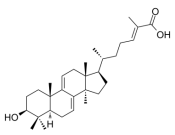


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg

Ganoderic acid Y

Cat. No.: HY-125713

Ganoderic acid Y is a **α-glucosidase** inhibitor with an **IC_{50}** of 170 μM for yeast α-glucosidase. Ganoderic acid Y inhibits **enterovirus 71 (EV71) replication** through blocking EV71 uncoating.

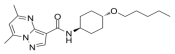


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Gcase activator 1

Cat. No.: HY-104038

Gcase activator 1 is an activator of **glucocerebrosidase** (**Gcase**) extracted from patent WO 2017192841 A1.

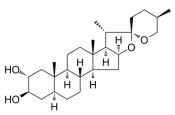


Purity: 98.09%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Gitogenin

Cat. No.: HY-N2574

Gitogenin is a natural steroid isolated from the whole plant of Tribulus longipetalus.

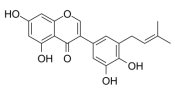


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 20 mg

Glycyrrhisoflavone

Cat. No.: HY-N3962

Glycyrrhisoflavone, an active prenylflavonoid, mainly derived from the extract of the roots of Glycyrrhiza uralensis Fisch.. Glycyrrhisoflavone inhibits **α-glucosidase**.

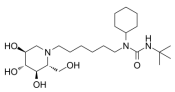


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

IHVR-19029

Cat. No.: HY-124662

IHVR-19029 is a potent endoplasmic reticulum (ER) **α-glucosidases I** and **II** inhibitor, with an **IC_{50}** of 0.48 μM for ER a-glucosidase I.

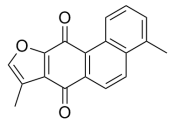


Purity: >98.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

Isotanshinone I

Cat. No.: HY-N6649

Isotanshinone I has inhibitory activity against **α-glucosidase** and formation of **AGE**, with **IC_{50}s** of 1.13 μM and 0.432 μM for α-glucosidase and AGE, respectively.

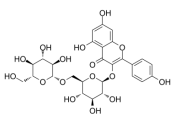


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Kaempferol 3-O-gentiobioside

Cat. No.: HY-N1510

Kaempferol 3-O-gentiobioside is a flavonoid isolated from C. alata leaves with antidiabetic activity. Kaempferol 3-O-gentiobioside possesses activity against α-glucosidase and displays carbohydrate enzyme inhibitory effect with an IC_{50} of 50.0 μM.

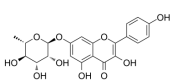


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Kaempferol-7-O-rhamnoside

Cat. No.: HY-N3431

Kaempferol-7-O-rhamnoside, isolated from Chimonanthus nitens Oliv. Leaves, is a potent **α-glucosidase activity** inhibitor. Kaempferol-7-O-rhamnoside has the potential for diabetes.



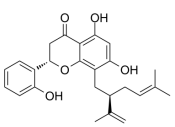
Purity: >99.0%
Clinical Data: No Development Reported
Size: 5 mg

Kushenol A

(Leachianone E)

Cat. No.: HY-N2278

Kushenol A (Leachianone E) is isolated from the root of Sophora flavescent. Kushenol A is a non-competitive **tyrosinase** inhibitor to block the conversion of L-tyrosine to L-DOPA, shows **IC_{50}** and **K_i**values of 1.1 μM and 0.4 μM, respectively.

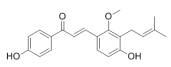


Purity: 99.84%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg

Licochalcone C

Cat. No.: HY-N0374

Licochalcone C could inhibit **α-glucosidase**, with IC_{50}s of <100 nM and 92.43 μM for α-glucosidase and protein tyrosine phosphatase 1B (PTP1B), respectively.

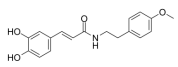


Purity: 99.55%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg

N-Caffeoyl O-methyltyramine

Cat. No.: HY-N7203

N-Caffeoyl O-methyltyramine is a class of alkaloid isolated from Cuscuta reflexa with strong inhibitory activity against **α-glucosidase** (IC_{50} of 103.58 μM).

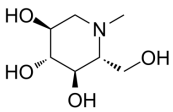


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

N-Methylmoranoline

(MOR 14; N-Methyl-1-deoxynojirimycin; N-Methylmoranolin) Cat. No.: HY-U00090

N-Methylmoranoline (MOR 14) is an **α-glucosidase** inhibitor.

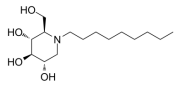


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg

N-Nonyldeoxynojirimycin

(NN-DNJ; Nonyl-DNJ) Cat. No.: HY-107532

N-Nonyldeoxynojirimycin (NN-DNJ) is a potent inhibitor of **alpha-glucosidase** and **alpha-1,6-glucosidase** (IC_{50}s, 0.42, 8.4 μM, respectively), inhibits glycogen breakdown.

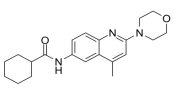


Purity: >99.0%
Clinical Data: No Development Reported
Size: 5 mg

NCGC00092410

Cat. No.: HY-114043

NCGC00092410 is a potent, selective, and nonsugar **glucocerebrosidase (GC)** inhibitor, with an IC_{50} of 31 nM. NCGC00092410 shows no activity against the related hydrolases at concentrations up to 77 μM.

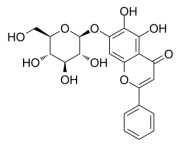


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Oroxin A

Cat. No.: HY-N2025

Oroxin A is the major component of an ethanol-water Oroxylum indicum (L.) Kurz (Bignoniaceae) seed extract (OISE), activates peroxisome proliferator-activated receptor γ (**PPARγ**) by docking into the PPARγ protein ligand-binding domain.

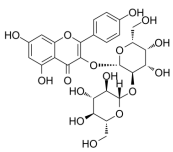


Purity: 99.76%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 20 mg

Panasenoside

Cat. No.: HY-N4258

Panasenoside is a flavonoid isolated from Lilium pumilum D. C. Panasenoside exhibits **α-glucosidase** inhibitory activity.

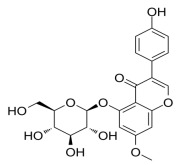


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Prunetin 5-O-β-D-glucopyranoside

Cat. No.: HY-N7683

Prunetin 5-O-β-D-glucopyranoside is an isoflavone isolated from extracts of Potentilla astracanica. Prunetin 5-O-β-D-glucopyranoside is a potent and uncompetitive inhibitor of **α-glucosidase**, with an IC_{50} of 56.05 μg/mL.

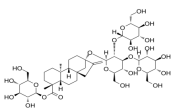


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg

Rebaudioside A

Cat. No.: HY-N0466

Rebaudioside A is a steviol glycoside, α-glucosidase inhibitor with IC50 of 35.01 μg/ml.can inhibit ATP-sensitive K+-channels.

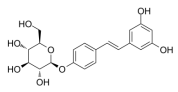


Purity: >98.0%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 100 mg, 500 mg

Resveratroloside

(trans-Resveratrol 4'-O-β-D-glucopyranoside) Cat. No.: HY-N4195

Resveratroloside is a competitive inhibitior of **α-glucosidase** with an IC_{50} of 22.9 μM. Resveratroloside has the ability to regulate PBG (postprandial blood glucose) levels. Resveratroloside exhibits cardioprotective effect.

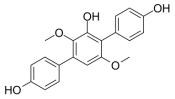


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg

Terphenyllin

Cat. No.: HY-119821

Terphenyllin is a naturally abundant p-terphenyl metabolite isolated from the coral derived fungus Aspergillus candidus, has significant **α-glucosidase** inhibitory activity.

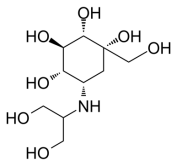


Purity: 98.18%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

Voglibose

Cat. No.: HY-B0025

Voglibose is an N-substituted derivative of valiolamine, excellent inhibitory activity against α-glucosidases and its action against hyperglycemia and various disorders caused by hyperglycemia.



Purity: >98.0%
Clinical Data: Launched
Size: 10 mM × 1 mL, 50 mg, 100 mg