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Inhibitors, Agonists, Screening Libraries

Aldose Reductase

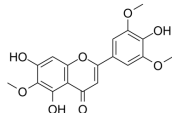
Aldose reductase is an NADPH-dependent oxidoreductase that catalyzes the reduction of a variety of aldehydes and carbonyls, including monosaccharides. It is primarily known for catalyzing the reduction of glucose to sorbitol, the first step in polyol pathway of glucose metabolism. The aldose reductase reaction, in particular the sorbitol produced, is important for the function of various organs in the body. Aldose reductase inhibitors are a class of drugs being studied as a way to prevent eye and nerve damage in people with diabetes.

Aldose Reductase Inhibitors

6-Methoxytricin

Cat. No.: HY-N6883

6-Methoxytricin (Compound 6) is a flavonoid isolated from *Artemisia iwayomogi*.

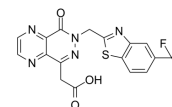


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg

Aldose reductase-IN-1

Cat. No.: HY-18967

Aldose reductase-IN-1 is a inhibitor of aldose reductase with IC₅₀ of 28.9 pM. IC₅₀ value: 28.9 pM Target: aldose reductase Detailed information please refer to WO2014113380 A1 and US20130225592.



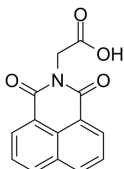
Purity: 99.86%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Alrestatin

(AY-22284)

Cat. No.: HY-B1202

Alrestatin is an inhibitor of aldose reductase, an enzyme involved in the pathogenesis of complications of diabetes mellitus, including diabetic neuropathy.



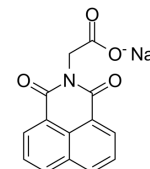
Purity: 99.80%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 500 mg

Alrestatin sodium

(AY-22284A)

Cat. No.: HY-B1202A

Alrestatin sodium is an inhibitor of aldose reductase, an enzyme involved in the pathogenesis of complications of diabetes mellitus, including diabetic neuropathy.

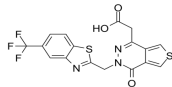


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

AT-007

Cat. No.: HY-129586

AT-007 is an orally active central nervous system (CNS) penetrant **Aldose Reductase** inhibitor for treatment of Galactosemia with an IC₅₀ value of 100 pM. AT-007 reduces toxic galactitol levels and prevents disease complications in GALT deficiency rats.



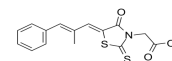
Purity: 99.33%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Epalrestat

(ONO2235)

Cat. No.: HY-66009

Epalrestat is an aldose reductase inhibitor for the treatment of diabetic neuropathy. Target: Aldose Reductase Epalrestat may affect or delay progression of the underlying disease process.



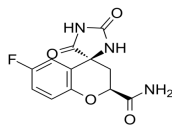
Purity: 99.59%
Clinical Data: Launched
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

Fidarestat

(SNK 860)

Cat. No.: HY-105185

Fidarestat (SNK 860) is an inhibitor of **aldose reductase**, with IC₅₀s of 26 nM, 33 μM, and 1.8 μM for aldose reductase, AKR1B10 and V301L AKR1B10, respectively; Fidarestat (SNK 860) has the potential to treat diabetic disease.



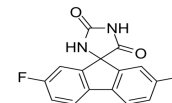
Purity: 99.10%
Clinical Data: Launched
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

Imirestat

(AL 1576; Alcon 1576; HOE 843)

Cat. No.: HY-16255

Imirestat (AL 1576) is an **aldose reductase** inhibitor, used for the treatment of diabetes.



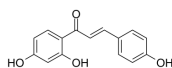
Purity: 99.52%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 20 mg

Isoliquiritigenin

(GU17; ISL; Isoliquiritigen)

Cat. No.: HY-N0102

Isoliquiritigenin is an anti-tumor flavonoid from the root of *Glycyrrhiza glabra*, which inhibits **aldose reductase** with an IC₅₀ of 320 nM. Isoliquiritigenin is a potent inhibitor of **influenza virus** replication with an EC₅₀ of 24.7 μM.



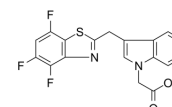
Purity: 98.17%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 200 mg

Lidorestat

(IDD-676)

Cat. No.: HY-106198

Lidorestat (IDD-676) is a potent, selective and orally active **aldose reductase** inhibitor with an IC₅₀ of 5 nM. Lidorestat can be used for chronic diabetes complications. Lidorestat also improves nerve conduction and reduces cataract formation.

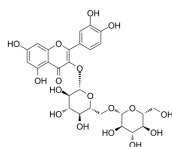


Purity: 99.50%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 25 mg

Quercetin 3-gentiobioside

Cat. No.: HY-N4089

Quercetin 3-gentiobioside is isolated from *A. iwayomogi*, AR and AGE formation inhibitor, demonstrates biological activities against Aldose reductase (AR) and the formation of advanced glycation endproducts (AGEs).



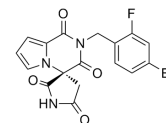
Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Ranirestat

(AS-3201)

Cat. No.: HY-15314

Ranirestat (AS-3201) potent and orally active **aldose reductase (AR)** inhibitor with IC_{50} s of 11 nM and 15 nM for **rat lens AR** and **recombinant human AR**, respectively, and a K_i of 0.38 nM for **recombinant human AR**.



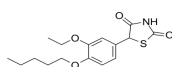
Purity: 98.32%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Risarestat

(CT 112)

Cat. No.: HY-16433

Risarestat (CT-112), an **aldose reductase** inhibitor, is developed for the treatment of diabetic complications.

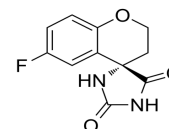


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Sorbinil

Cat. No.: HY-50289

Sorbinil, is an Aldose reductase inhibitor (ARI). Sorbinil plays therapeutic role in treating diabetes and diabetic complications, decreases AR activity and inhibits polyol pathway, it to be found comparatively safer than other ARIs for human use.



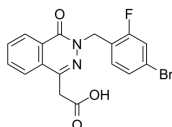
Purity: 98.31%
Clinical Data: Phase 3
Size: 1 mg

Statil

(Ponalrestat)

Cat. No.: HY-106697

Statil (Ponalrestat) is an orally active, selective and noncompetitive **aldose reductase (AKR1B1; ALR)** inhibitor. Statil selectively inhibits ALR2 ($K_i=7.7$ nM) over ALR1 ($K_i=60$ μ M). Statil inhibits the conversion of glucose to sorbitol.



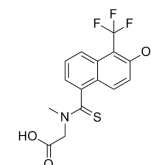
Purity: 98.07%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

Tolrestat

(AY-27773)

Cat. No.: HY-16500

Tolrestat is a potent, orally active **aldose reductase** inhibitor with IC_{50} of 35 nM.



Purity: 98.85%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg