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Inhibitors, Agonists, Screening Libraries

Xanthine Oxidase

XO

Xanthine oxidase (XO) is an important enzyme catalyzing the hydroxylation of hypoxanthine to xanthine and xanthine to uric acid which is excreted by kidneys. Xanthine oxidase belongs to the molybdenum-protein family containing one molybdenum, one of the flavin adenine dinucleotides (FAD), and two iron-sulfur (2Fe-2S) centers of the ferredoxin type in each of its two independent subunits. The enzyme contains two separated substrate-binding sites. XO catalysed the oxidation of hypoxanthine to xanthine and subsequently to uric acid.

Xanthine oxidase inhibitors (XOIs) are typically used in the treatment of nephropathy and renal stone diseases linked to hyperuricemia.

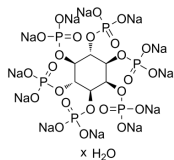
Xanthine Oxidase Inhibitors

<p>Allopurinol</p> <p>Cat. No.: HY-B0219</p>	<p>Baicalein (5,6,7-Trihydroxyflavone)</p> <p>Cat. No.: HY-N0196</p>
<p>Allopurinol (Zyloprim) is a xanthine oxidase inhibitor with an IC₅₀ of 7.82±0.12 μM. Target: XAO Allopurinol (Zyloprim, and generics) is a drug used primarily to treat hyperuricemia (excess uric acid in blood plasma) and its complications, including chronic gout.</p> <p>Purity: 99.89%</p> <p>Clinical Data: Launched</p> <p>Size: 10 mM × 1 mL, 500 mg, 5 g, 10 g</p>	<p>Baicalein (5,6,7-Trihydroxyflavone) is a xanthine oxidase inhibitor with an IC₅₀ value of 3.12 mM.</p> <p>Purity: >98.0%</p> <p>Clinical Data: Launched</p> <p>Size: 10 mM × 1 mL, 100 mg</p>
<p>Benzbromarone</p> <p>Cat. No.: HY-B1135</p>	<p>Febuxostat (TEI 6720; TMX 67)</p> <p>Cat. No.: HY-14268</p>
<p>Benzbromarone is a highly effective and well tolerated non-competitive inhibitor of xanthine oxidase, used as an uricosuric agent, used in the treatment of gout.</p> <p>Purity: 99.38%</p> <p>Clinical Data: Launched</p> <p>Size: 10 mM × 1 mL, 100 mg</p>	<p>Febuxostat (TEI 6720) is selective xanthine oxidase inhibitor with a K_i of 0.6 nM.</p> <p>Purity: 99.90%</p> <p>Clinical Data: Launched</p> <p>Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg</p>
<p>Lobetyolin</p> <p>Cat. No.: HY-N0327</p>	<p>Myricetin 3-O-galactoside</p> <p>Cat. No.: HY-N3220</p>
<p>Lobetyolin, a bioactive compound, is derived from <i>Codonopsis pilosula</i>. Lobetyolin has anti-inflammatory, anti-oxidative and xanthine oxidase inhibiting activities. Lobetyolin also induces the apoptosis via the inhibition of ASCT2-mediated glutamine metabolism.</p> <p>Purity: 99.88%</p> <p>Clinical Data: No Development Reported</p> <p>Size: 5 mg</p>	<p>Myricetin 3-O-galactoside, isolated from the leaves of <i>Myrtus communis</i>, inhibits xanthine oxidase (XO) activity, lipid peroxidation and scavenges the free radical. Myricetin 3-O-galactoside inhibits lipid peroxidation with an IC₅₀ of 160 μg/mL. Antioxidant activity.</p> <p>Purity: >98%</p> <p>Clinical Data: No Development Reported</p> <p>Size: 1 mg, 5 mg</p>
<p>Nequinatate</p> <p>Cat. No.: HY-116433</p>	<p>O-Desisobutyl-O-n-propyl Febuxostat</p> <p>Cat. No.: HY-131268</p>
<p>Nequinatate, a quinoline compound, is an anticoccidial agent against cecal coccidiosis (<i>Eimeria tenella</i>) infections. Nequinatate inhibits xanthine oxidoreductase (XOD) activity.</p> <p>Purity: >98%</p> <p>Clinical Data: No Development Reported</p> <p>Size: 1 mg, 5 mg</p>	<p>O-Desisobutyl-O-n-propyl Febuxostat, extracted from the patent CN 103467412, is an xanthine oxidase inhibitor.</p> <p>Purity: >98%</p> <p>Clinical Data: No Development Reported</p> <p>Size: 1 mg, 5 mg</p>
<p>Oxypurinol (Oxipurinol)</p> <p>Cat. No.: HY-19657</p>	<p>Phytic acid (Inositol hexaphosphate; myo-Inositol, hexakis(dihydrogen phosphate))</p> <p>Cat. No.: HY-N0814</p>
<p>Oxipurinol (Oxipurinol), the major active metabolite of Allopurinol, is an inhibitor of xanthine oxidase. Oxipurinol can be used to regulate blood urate levels and treat gout.</p> <p>Purity: >98.0%</p> <p>Clinical Data: Phase 3</p> <p>Size: 10 mM × 1 mL, 50 mg</p>	<p>Phytic acid is a phosphorus storage compound of seeds and cereal grains. Phytic acid is known as a food inhibitor, which has a strong ability to chelate multivalent metal ions, specially zinc, calcium, iron and as with protein residue.</p> <p>Purity: >95.0%</p> <p>Clinical Data: Launched</p> <p>Size: 250 mg (969.6 mM * 391 μL in Water)</p>

Phytic acid dodecasodium salt hydrate (Inositol hexaphosphate dodecasodium salt hydrate; ...)

Cat. No.: HY-N0814A

Phytic acid dodecasodium salt hydrate is a phosphorus storage compound of seeds and cereal grains.

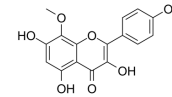


Purity: >98.0%
Clinical Data: Phase 3
Size: 250 mg

Prudomestin

Cat. No.: HY-N1547

Prudomestin, isolated from the heartwood of *Prunus domestica*, shows potent **xanthine oxidase (XO)** inhibitory activity ($IC_{50} \approx 6 \mu M$).

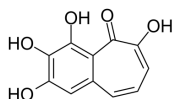


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Purpurogallin

Cat. No.: HY-12136

Purpurogallin is a naturally phenol extracted from the plants of *Quercus* spp. has potent **xanthine oxidase (XO)** inhibitory activity with an IC_{50} of 0.2 μM . Purpurogallin has antioxidant and anti-inflammatory effects.



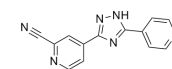
Purity: 95.40%
Clinical Data: No Development Reported
Size: 10 mM \times 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Topiroxostat

(FYX-051)

Cat. No.: HY-14874

Topiroxostat (FYX-051) is a potent and orally active **xanthine oxidoreductase (XOR)** inhibitor with an IC_{50} value of 5.3 nM and a K_i value of 5.7 nM. Topiroxostat exhibits weak **CYP3A4**-inhibitory activity (18.6%). Topiroxostat has the potential for hyperuricemia treatment.



Purity: 99.68%
Clinical Data: Launched
Size: 10 mM \times 1 mL, 10 mg, 25 mg, 50 mg, 100 mg