Lipoxygenase

LOX

Lipoxygenases (LOXs) are dioxygenases that catalyze the formation of corresponding hydroperoxides from polyunsaturated fatty acids such as linoleic acid and arachidonic acid. Thre are six LOX isoforms have been found in the humans and mice. 5-Lipoxygenase (5-LOX) is a distinct isoform playing an important role in asthma and inflammation. 5-LOX causes the constriction of bronchioles in response to cysteinyl leukotrienes such as LTC4, thus leading to asthma. 5-LOX also induces neutrophilic inflammation by its recruitment in response to LTB4. 12-Lipoxygenase (12-LOX) is an isoform expressed in epithelial cells and myeloid cells including platelets. 12-LOX can be found in the epithelial cells of the skin. 12-LOX is a potential target for novel anti-platelet therapeutics. 15-Lipoxygenase (15-LOX) is expressed in epithelial cells and leukocytes, has different substrate specificity in the humans and mice.15-LOX-1 is a target of nonsteroidal anti-inflammatory drug-induced apoptosis in colorectal cancer cells.

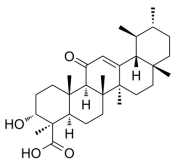
Lipoxygenase Inhibitors & Antagonists

11-Keto-beta-boswellic acid

(11-Keto-β-boswellic acid)

Cat. No.: HY-N2056

11-Keto-beta-boswellic acid (11-Keto-β-boswellic acid) is a pentacyclic triterpenic acid of the oleogum resin from the bark of the Boswellia serrate tree, popularly known as Indian Frankincense.

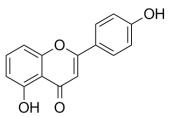


Purity: 99.96%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

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.

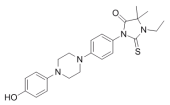


Purity: 95.75%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 100 mg

5-Lipoxygenase-In-1

Cat. No.: HY-U00308

5-Lipoxygenase-In-1 is a **5-Lipoxygenase** inhibitor extracted from patent EP 331232 A2, table 4, compound example 4.10.



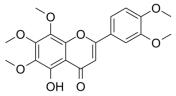
Purity: >98%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg

5-O-Demethylnobiletin

(5-Demethylnobiletin)

Cat. No.: HY-N1942

5-O-Demethylnobiletin (5-Demethylnobiletin), a polymethoxyflavone isolated from Sideritis tragoriganum, is a direct inhibition of 5-LOX (IC_{50}=0.1 μM), without affecting the expression of COX-2.

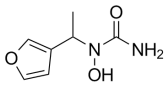


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 20 mg

A-69412

Cat. No.: HY-101945

A-69412 is a reversible, specific inhibitor of the **hydrophilic 5-lipoxygenase** (**5-LO**). A-69412 has the potential to treat asthma and ulcerative colitis, and possibly other inflammatory and allergic conditions.



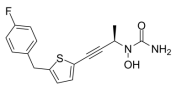
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Atreleuton

(ABT-761; VIA-2291)

Cat. No.: HY-117853

Atreleuton (ABT-761) is a selective, reversible, and orally bioavailable **5-Lipoxygenase (5-LO)** inhibitor. Atreleuton (ABT-761) exhibits potent and selective inhibition of leukotriene formation.



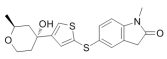
Purity: >98%
Clinical Data:
Size: 1 mg, 5 mg

AZD 4407

(ZD 4407)

Cat. No.: HY-U00217

AZD 4407 is a potent **5-lipoxygenase** inhibitor.



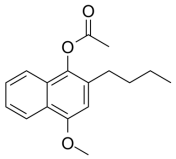
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Bunaprolast

(U66858)

Cat. No.: HY-U00170

Bunaprolast (U66858) is a potent inhibitor of LTB_4 production in human whole blood. Bunaprolast (U66858) also exhibits significant inhibition of **lipoxygenase** and TXB_2 release.

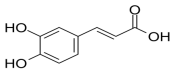


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Caffeic acid

Cat. No.: HY-N0172

Caffeic acid is an inhibitor of both **TRPV1** ion channel and **5-Lipoxygenase** (**5-LO**).

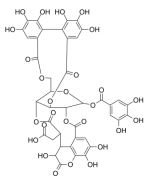


Purity: 98.80%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg, 5 g

Chebulagic acid

Cat. No.: HY-N1996

Chebulagic acid is a COX-LOX dual inhibitor isolated from the fruits of Terminalia chebula Retz, on angiogenesis. Chebulagic acid is a **M2 serine to asparagine 31 mutation (S31N)** inhibitor and influenza antiviral.



Purity: 99.29%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg

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

Cirsiliol

Cat. No.: HY-110399

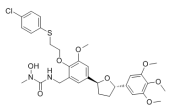
Cirsiliol is a potent and selective **5-lipoxygenase** inhibitor and a competitive low affinity benzodiazepine receptor ligand.

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

CMI-392

Cat. No.: HY-19205A

CMI-392 is a dual **5-lipoxygenese** inhibitor and platelet-activating factor (**PAF**) receptor antagonist with IC_{50}s of 100 and 10 nM, respectively.



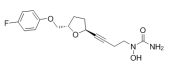
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

CMI977

(LDP977)

Cat. No.: HY-U00260

CMI977 is a potent **5-Lipoxygenase** (**5-LO**) inhibitor.



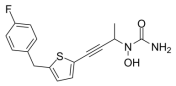
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

COX/5-LO-IN-1

(Atreleuton analog)

Cat. No.: HY-U00347

COX/5-LO-IN-1 (Atreleuton analog) is an inhibitor of **cylooxygenase** and **5-lipoxygenase (5-LO)**, used for the research of inflammatory and allergic disease states.



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

Docebenone

(AA 861)

Cat. No.: HY-12886

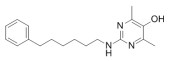
Docebenone (AA 861) is a potent, selective and orally active **5-LO (5-lipoxygenase)** inhibitor.

Purity: 99.10%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Enazadrem

Cat. No.: HY-U00024

Enazadrem is a **5-lipoxygenase** inhibitor with antiinflammatory activities.

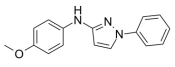


Purity: 97.26%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

FPL 62064

Cat. No.: HY-105024

FPL 62064 is a potent **5-lipoxygenase (5-LOX)** and **COX** dual inhibitor, with IC_{50} values of 3.5 μM and 3.1 μM for RBL-1 cytosolic 5-lipoxygenase and prostaglandin synthetase (cyclooxygenase), respectively. FPL 62064 has potent anti-inflammatory activity.



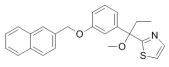
Purity: 98.46%
Clinical Data: No Development Reported
Size: 10 mM × 1ml, 5 mg, 10 mg, 50 mg

ICI 211965

(ZM-211965)

Cat. No.: HY-100148

ICI 211965 (ZM-211965) is a selective and orally potent **5-Lipoxygenase** (**5-LPO**) inhibitor.



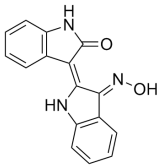
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Indirubin-3'-monoxime

(Indirubin-3'-oxime)

Cat. No.: HY-19807

Indirubin-3'-monoxime is a potent **GSK-3β** inhibitor, and weakly inhibits **5-Lipoxygenase**, with IC_{50}s of 22 nM and 7.8-10 μM, respectively; Indirubin-3'-monoxime also shows inhibitory activities against CDK5/p25 and CDK1/cyclin B, with IC_{50}s of 100 and 180 nM.



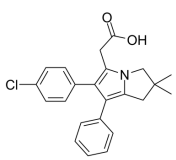
Purity: 99.95%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

Licofelone

(ML-3000)

Cat. No.: HY-B1452

Licofelone (ML-3000) is a dual **COX/5-lipoxygenase (5-LOX)** inhibitor (IC_{50}=0.21/0.18 μM, respectively) for the treatment of osteoarthritis. Licofelone exerts anti-inflammatory and anti-proliferative effects.



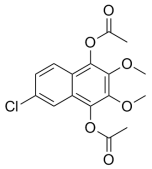
Purity: >99.0%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg

Lonapalene

(RS4317)

Cat. No.: HY-U00156

Lonapalene (RS4317) is a topically effective **5-lipoxygenase** (**5-LO**) inhibitor.

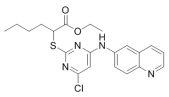


Purity: 97.81%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg

LP117

Cat. No.: HY-U00438

LP117 is a novel and potent inhibitor of **5-Lipoxygenase** (**5-LO**) product synthesis with an IC_{50} of 1.1 μM.

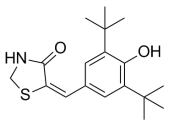


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

LY 178002

Cat. No.: HY-101579

LY 178002 is a potent inhibitor of **5-lipoxygenase** (**5-LPO**), **phospholipase A2**, with IC_{50} of 0.6 μM for 5-lipoxygenase, inhibits cellular production of LTB4 by human polymorphonuclear leukocytes, and shows relatively weak inhibition on **cyclooxygenase**.

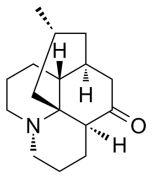


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Lycopodine

Cat. No.: HY-114372

Lycopodine, a pharmacologically important bioactive component derived from Lycopodium clavatumspores, triggers **apoptosis** by modulating **5-lipoxygenase**, and depolarizing mitochondrial membrane potential in refractory prostate cancer cells without modulating p53 activity.



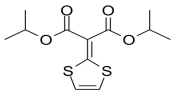
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Malotilate

(NKK 105)

Cat. No.: HY-A0060

Malotilate is a liver protein metabolism improved compound, which selectively inhibit the 5-lipoxygenase.

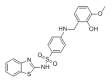


Purity: 99.54%
Clinical Data: Launched
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

ML355

Cat. No.: HY-12341

ML355 is a potent and selective inhibitor of **12-Lipoxygenase (12-LOX)** with an IC_{50} of 0.34 μM, shows excellent selectivity over related lipoxygenases and cyclooxygenases, and possesses favorable ADME properties.



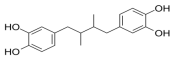
Purity: 98.28%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Nordihydroguaiaretic acid

(NDGA)

Cat. No.: HY-N0198

Nordihydroguaiaretic acid is a **5-lipoxygenase** (**5LOX**) (IC_{50}=8 μM) and tyrosine kinase inhibitor.

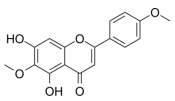


Purity: 99.78%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 100 mg, 500 mg

Pectolinarigenin

Cat. No.: HY-N0493

Pectolinarigenin, isolated from Cirsium chanroenicum, is a dual inhibitor of **COX-2/5-LOX**. Anti-inflammatory activity. Pectolinarigenin has potent inhibitory activities on melanogenesis.



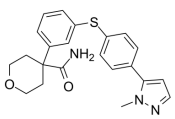
Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 20 mg

PF-4191834

(PF-04191834)

Cat. No.: HY-117048

PF-4191834 (PF-04191834) is an orally active, noniron chelating, and non-redox inhibitor of the **5-Lipoxygenase (5-LOX)** (IC_{50}=229 nM), displays ~300-fold selectivity for 5-LOX over 12-LOX and 15-LOX, shows no activity toward the cyclooxygenase enzymes, and is effective...



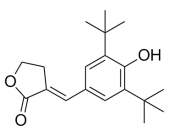
Purity: >99.0%
Clinical Data: No Development Reported
Size: 5 mg

PGS-IN-1

(KME-4)

Cat. No.: HY-101587

PGS-IN-1 is a potent inhibitor of **prostaglandin synthetase** (PGS) with an IC_{50} of 0.28 μM; also inhibits **5-lipoxygenase** with an IC_{50} of 1.05 μM.

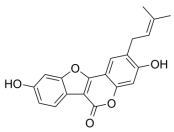


Purity: 99.51%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 20 mg

Psoralidin

Cat. No.: HY-N0232

Psoralidin, isolated from the seed of Psoralea corylifolia, is a dual inhibitor of **COX-2** and **5-LOX**, regulates ionizing radiation (IR)-induced pulmonary inflammation.Anti-cancer, anti-bacterial, and anti-inflammatory properties.

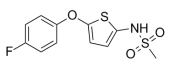


Purity: 99.90%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

RWJ 63556

Cat. No.: HY-U00022

RWJ 63556 is an orally active **COX-2 selective/5-lipoxygenase** inhibitor, with anti-inflammatory activities.



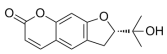
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

S-(+)-Marmesin

((+)-Marmesin; (S)-Marmesin)

Cat. No.: HY-N2176

S-(+)-Marmesin is a natural coumarin, exhibiting **COX-2/5-LOX** dual inhibitory activity.

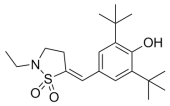


Purity: 99.04%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

S-2474

Cat. No.: HY-19212

S-2474 is an inhibitor of **COX-2** and **5-lipoxygenase (5-LO)**, with IC_{50}s of 11 nM and 27 μM for COX-2 and COX-1 in human intact cells, and used as a nonsteroidal anti-inflammatory drug.

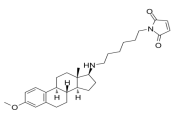


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

U-73122

Cat. No.: HY-13419

U-73122 is a **phospholipase C (PLC)** and **5-LO (5-lipoxygenase)** inhibitor with an $IC_{50}$of 1-2.1 μM for PLC.

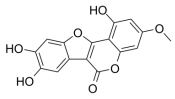


Purity: 98.17%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Wedelolactone

Cat. No.: HY-N0551

Wedelolactone, a natural product from Ecliptae herba, suppresses LPS-induced **caspase-11** expression by directly inhibiting the IKK Complex. Wedelolactone inhibits **5-lipoxygenase** (**5-Lox**) (IC_{50}~2.5 μM) activity by an oxygen radical scavenging mechanism.

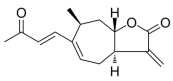


Purity: 99.91%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 20 mg

Xanthatin

Cat. No.: HY-N3032

Xanthatin is isolated from Xanthium strumarium leaves.



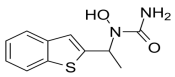
Purity: 99.79%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Zileuton

(A 64077; Abbott 64077)

Cat. No.: HY-14164

Zileuton is a potent and selective inhibitor of **5-lipoxygenase** with antiasthmatic properties.



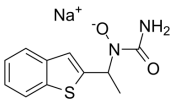
Purity: 99.93%
Clinical Data: Launched
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

Zileuton sodium

(A 64077 sodium; Abbott 64077 sodium)

Cat. No.: HY-14164A

Zileuton sodium (A 64077 sodium) is a potent and selective inhibitor of **5-lipoxygenase**, exhibiting inflammatory activities.

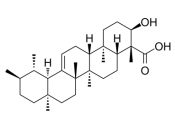


Purity: >98%
Clinical Data: Launched
Size: 1 mg, 5 mg

β-Boswellic acid

Cat. No.: HY-N2513

β-Boswellic acid is isolated from the gum resin of Boswellia serrate. β-Boswellic acid is a nonreducing-type inhibitor of the 5-lipoxygenase (**5-LO**) product formation either interacting directly with the 5-LO or blocking its translocation.



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