Chloride Channel

Cl− Channels

Chloride channels represent a relatively under-explored target class for drug discovery as elucidation of their identity and physiological roles has lagged behind that of many other drug targets. Chloride channels are involved in a wide range of biological functions, including epithelial fluid secretion, cell-volume regulation, neuroexcitation, smooth-muscle contraction and acidification of intracellular organelles. Mutations in several chloride channels cause human diseases, including cystic fibrosis, macular degeneration, myotonia, kidney stones, renal salt wasting and hyperekplexia. Chloride-channel modulators have potential applications in the treatment of some of these disorders, as well as in secretory diarrhoeas, polycystic kidney disease, osteoporosis and hypertension.

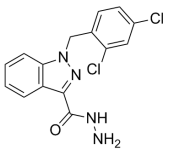
Chloride channel accessory proteins, also known as calcium-activated chloride channel regulators (CLCA proteins), are a family of transmembrane proteins that have been suggested to have a role in chloride conductance in epithelial cells.

Chloride Channel Inhibitors & Activators

Adjudin
(AF-2364)

Cat. No.: HY-18996

Adjudin is an extensively studied male contraceptive with a superior **mitochondria**-inhibitory effect. Adjudin is also a potent **Cl^- channel** blocker.

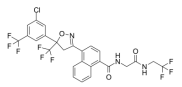


Purity: >98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Afoxolaner

Cat. No.: HY-16974

Afoxolaner is an orally active isoxazoline insecticide/acaricide against Ixodes scapularis in dogs.

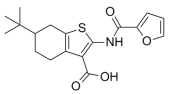


Purity: 99.53%
Clinical Data: Launched
Size: 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg

CaCCinh-A01

Cat. No.: HY-100611

CaCCinh-A01 is an inhibitor of both **TMEM16A** and **calcium-activated chloride channel** (**CaCC**) with IC_{50}s of 2.1 and 10 μM, respectively.

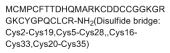


Purity: 99.79%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Chlorotoxin

Cat. No.: HY-P0173A

Chlorotoxin is a 36 amino-acid peptide from the venom of the Israeli scorpion Leiurus quinquestriatus with anticancer activity. Chlorotoxin is a **chloride channel** blocker.

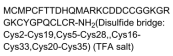


Purity: >98.0%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Chlorotoxin TFA

Cat. No.: HY-P0173B

Chlorotoxin TFA is a peptide isolated from the venom of the scorpion Leiurus quinquestriatus, acts as a **chloride channel** blocker. Anti-cancer activity.

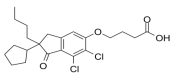


Purity: >98%
Clinical Data: Phase 1
Size: 100 μg, 500 μg, 1 mg

DCPIB

Cat. No.: HY-103371

DCPIB is a selective, reversible and potent inhibitor of volume-regulated anion channels (**VRAC**). DCPIB voltage-dependently activates potassium channels TREK1 and TRAAK and inhibits TRESK, TASK1 and TASK3 (IC_{50}s of 0.14, 0.95, 50.72 μM, respectively).

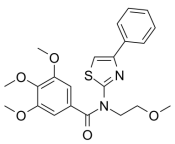


Purity: 99.81%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Eact

Cat. No.: HY-103368

Eact is a selective and potent activator of **TMEM16A**, directly activates the TRPV1 channels in sensory nociceptors and produces itch, acute nociception and thermal hypersensitivity.

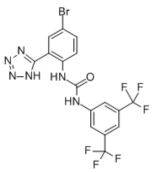


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Endovion
(NS3728)

Cat. No.: HY-105917

Endovion (NS3728) is a pharmacological **anion channel inhibitor (like chloride channel)** and the specific **VRAC/VSOAC** blocker. Endovion (NS3728) is also an Anoctamin-1 (ANO 1) channel inhibitor.

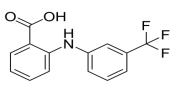


Purity: 99.27%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Flufenamic acid

Cat. No.: HY-B1221

Flufenamic acid is a non-steroidal anti-inflammatory agent, inhibits cyclooxygenase (**COX**), activates **AMPK**, and also modulates ion channels, blocking **chloride channels** and **L-type Ca^{2+} channels**, modulating non-selective cation channels (**NSC**), activating **K^+ channels**.

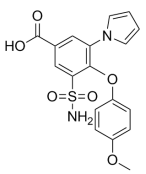


Purity: 99.92%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg

H100

Cat. No.: HY-100322

H100 is a **Cl^- transport** inhibitor, with partial effects against both the NaK2Cl cotransporter and the Band 3 anion exchanger, but no effect against KCl cotransporter, in human erythrocytes.



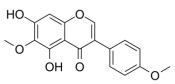
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

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

Irisolidone

Cat. No.: HY-N2412

Irisolidone is a major isoflavone found in Pueraria lobata flowers. Irisolidone exhibits potent hepatoprotective activity. Irisolidone shows the high efficacy for **volume-regulated anion channels (VRAC)** blockade.



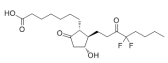
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Lubiprostone

(RU-0211; SPI-0211)

Cat. No.: HY-B0679

Lubiprostone(SPI-0211;RU0211) is a gastrointestinal agent used for the treatment of idiopathic chronic constipation.

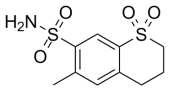


Purity: >98.0%
Clinical Data: Launched
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg

Meticrane

Cat. No.: HY-B0908

Meticrane is a diuretic. Meticrane inhibits the reabsorption of **sodium** and **chloride** ions in the distal convoluted tubule. Meticrane is used to treat essential hypertension.

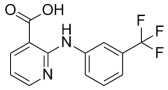


Purity: 98.25%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg

Niflumic acid

Cat. No.: HY-B0493

Niflumic acid, a Ca2+-activated Cl- channel blocker, is an analgesic and anti-inflammatory agent used in the treatment of rheumatoid arthritis.

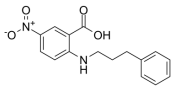


Purity: 99.86%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg

NPPB

Cat. No.: HY-101012

NPPB is a blocker of the **outwardly rectifying chloride channel** (**ORCC**).

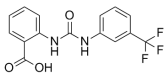


Purity: 99.89%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg

NS1652

Cat. No.: HY-100244

NS1652 is a reversible **anion conductance** inhibitor, blocks **chloride channel**, with an IC_{50} of 1.6 μM in human and mouse red blood cells.

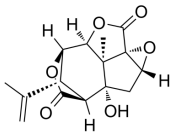


Purity: 99.89%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg

Picrotoxinin

Cat. No.: HY-B1494

Picrotoxinin, a potent convulsant, is a **chloride channel** blocker. Picrotoxinin is a noncompetitive **$GABA_A$ receptor** antagonist, which negatively modulates the action of GABA on $GABA_A$ receptors.



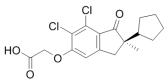
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

R(+)-IAA-94

(R(+)-Methylindazone)

Cat. No.: HY-12693

R(+)-IAA-94 is a potent indanyloxyacetic acid blocker of epithelial chloride channels. IC50 value: Target: IAA-94 has been employed in modulating chloride channel function to probe the dynamics and function of the channels.



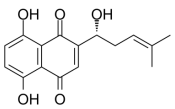
Purity: 99.70%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 50 mg

Shikonin

(C.I. 75535; Isoarnebin 4)

Cat. No.: HY-N0822

Shikonin is a major component of a Chinese herbal medicine named zicao. Shikonin is a potent **TMEM16A chloride channel** inhibitor with an IC_{50} of 6.5 μM. Shikonin is a specific **pyruvate kinase M2 (PKM2)** inhibitor and can also inhibit **TNF-α** and **NF-κB** pathway.

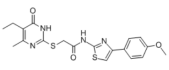


Purity: 99.80%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg

T16Ainh-A01

Cat. No.: HY-100612

T16Ainh-A01, an aminophenylthiazole, is a potent **transmembrane protein 16A (TMEM16A)** inhibitor, inhibiting TMEM16A-mediated chloride currents with an IC_{50} value of ~1 μM. TMEM16A (ANO1) functions as a calcium-activated chloride channel (CaCC).

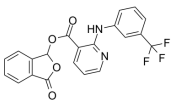


Purity: >99.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

Talniflumate

(BA 7602-06) **Cat. No.:** HY-103370

Talniflumate (BA 7602-06) is the prodrug of Niflumic acid (HY-B0493), exerting its activity in the body through conversion to niflumic acid by esterase. Talniflumate is an orally active **Ca^{2+}-activated Cl^- channel (CaCC)** blocker.



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