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 & Modulators

### Adjudin (AF-2364)  
Cat. No.: HY-18996

**Bioactivity:** 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 x 1 mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

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### CaCCinh-A01
Cat. No.: HY-100611

**Bioactivity:** CaCCinh-A01 is an inhibitor of both TMEM16A and calcium-activated chloride channel (CaCC) with IC₅₀ of 2.1 and 10 μM, respectively.

**Purity:** 99.60%

**Clinical Data:** No Development Reported

**Size:** 10 mM x 1 mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

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### Chlorotoxin
Cat. No.: HY-P0173A

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

**Purity:** 98.0%

**Clinical Data:** No Development Reported

**Size:** 100μg, 500μg, 1 mg

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### Flufenamic acid
Cat. No.: HY-B1221

**Bioactivity:** 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 Ca²⁺ channels, modulating non-selective cation channel...

**Purity:** 99.92%

**Clinical Data:** Launched

**Size:** 10 mM x 1 mL in DMSO, 100 mg

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### H100
Cat. No.: HY-100322

**Bioactivity:** 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, 10 mg

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### Lubiprostone (RU-0211; SPI-0211)
Cat. No.: HY-B0679

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

**Purity:** 98.0%

**Clinical Data:** Launched

**Size:** 10 mM x 1 mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg

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### Meticrane
Cat. No.: HY-80908

**Bioactivity:** 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:** 98.79%

**Clinical Data:** Launched

**Size:** 10 mM x 1 mL in DMSO, 100 mg

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### Niflumic acid
Cat. No.: HY-B0493

**Bioactivity:** 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 x 1 mL in DMSO, 100 mg

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### NPPB (5-Nitro-2-(3-phenylpropylamino)benzoic acid; Hoechst 144; HOE 144)
Cat. No.: HY-101012

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

**Purity:** 99.9%

**Clinical Data:** No Development Reported

**Size:** 10 mM x 1 mL in DMSO, 10 mg, 50 mg, 100 mg

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### NS1652
Cat. No.: HY-100244

**Bioactivity:** NS1652 is a reversible anion conductance inhibitor, blocks chloride channel, with an IC₅₀ of 1.6 μM in human and mouse red blood cells.

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 1 mg, 5 mg, 10 mg
### R(+)−IAA−94

**(R(+)-Methylindazone)**  
Cat. No.: HY-12693  

<table>
<thead>
<tr>
<th>Bioactivity</th>
<th>R(+)−IAA−94 is a potent indanyloxyacetic acid blocker of epithelial chloride channels.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity:</td>
<td>98.37%</td>
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<tr>
<td>Clinical Data:</td>
<td>No Development Reported</td>
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<tr>
<td>Size:</td>
<td>10 mM x 1 mL in DMSO, 10 mg, 50 mg</td>
</tr>
</tbody>
</table>

### Shikonin

**(C.I. 75535; Isoarnebin 4)**  
Cat. No.: HY-N0822  

<table>
<thead>
<tr>
<th>Bioactivity</th>
<th>Shikonin is a major component of a Chinese herbal medicine named zicao. Shikonin has shown various biological activities, including inhibition of TNF-α, NF-κB, HIV-1.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity:</td>
<td>99.80%</td>
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<tr>
<td>Clinical Data:</td>
<td>No Development Reported</td>
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<tr>
<td>Size:</td>
<td>10 mM x 1 mL in DMSO, 10 mg, 25 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>