Lodoxamide

Cat. No.: HY-14270
CAS No.: 53882-12-5
Molecular Formula: C₁₁H₆ClN₃O₆
Molecular Weight: 311.63
Target: Histamine Receptor
Pathway: GPCR/G Protein; Immunology/Inflammation
Storage: Powder
-20°C 3 years
4°C 2 years
In solvent
-80°C 6 months
-20°C 1 month

Solvent & Solubility

In Vitro
DMSO : ≥ 30 mg/mL (96.27 mM)
* “≥” means soluble, but saturation unknown.

Preparation of Stock Solutions

<table>
<thead>
<tr>
<th>Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>3.2089 mL</td>
<td>16.0447 mL</td>
<td>32.0893 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6418 mL</td>
<td>3.2089 mL</td>
<td>6.4179 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3209 mL</td>
<td>1.6045 mL</td>
<td>3.2089 mL</td>
</tr>
</tbody>
</table>

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description
Lodoxamide is an antiallergic compound acting as a mast-cell stabilizer for the treatment of asthma and allergic conjunctivitis.

In Vitro
Lodoxamide inhibits compound 48/80-induced histamine release and ionophore-induced ⁴⁵Ca influx with associated histamine release in purified rat peritoneal mast cells. The chemotactic response of eosinophils to fMLP as well as to IL-5 is significant and dose-dependent inhibited by Lodoxamide. Lodoxamide is also able to strongly inhibit the release of eosinophil peroxidase after IgA-dependent activation and, to a lesser extent, the release of eosinophil cationic protein and eosinophil-derived neurotoxin.

In Vivo
Lodoxamide has been demonstrated to have cromolyn-like activity when studied in the rat peritoneal mast cell assay (PCA) model and in Ascaris antigen-sensitized rhesus monkeys. When given intravenously, orally, or intrabronchially by aerosol, lodoxamide significantly inhibits the increased respiratory frequency and decreased tidal volume induced by antigen challenge in Ascaris-sensitized, anesthetized rhesus monkeys. Addition of lodoxamide tromethamine to
Euro-Collins or University of Wisconsin solution results in a marked decrease in lung reperfusion injury as demonstrated by increased oxygenation, decreased microvascular permeability, and increased compliance\textsuperscript{[3]}. Patients treated with lodoxamide tromethamine demonstrate an improvement in daytime breathing difficulty, cough, sputum production, and sleep\textsuperscript{[4]}.

REFERENCES


