Lodoxamide

Cat. No.: HY-14270

CAS No.: 53882-12-5

Molecular Formula: $C_{11}H_6ClN_3O_6$

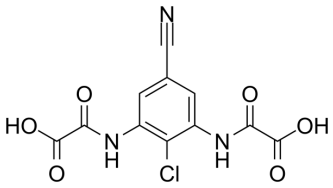
Molecular Weight: 311.63

Target: Histamine Receptor

Pathway: GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling

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 : 50 mg/mL (160.45 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2089 mL	16.0447 mL	32.0893 mL
	5 mM	0.6418 mL	3.2089 mL	6.4179 mL
	10 mM	0.3209 mL	1.6045 mL	3.2089 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 3.57 mg/mL (11.46 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (8.02 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.02 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Lodoxamide (U-42585E free acid) 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 ^{45}Ca influx with associated histamine release in purified rat peritoneal mast cells[1]. 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[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Lodoxamide has been demonstrated to have cromolyn-like activity when studied in the rat peritoneal mast cell assay (PCA) model3 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[1]. 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[3]. Patients treated with lodoxamide tromethamine demonstrate an improvement in daytime breathing difficulty, cough, sputum production, and sleep[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Watt GD, et al. Protective effect opf lodoxamide tromethamine on allergen inhalation challenge. J Allergy Clin Immunol. 1980 Oct;66(4):286-94.

[2]. Capron M,et al. Inhibitory effects of lodoxamide on eosinophil activation. Int Arch Allergy Immunol. 1998 Jun;116(2):140-6.

[3]. Barr ML, et al. Addition of a mast cell stabilizing compound to organ preservation solutions decreases lung reperfusion injury. J Thorac Cardiovasc Surg. 1998 Mar;115(3):631-6; discussion 636-7.

[4]. Mann JS, et al. Inhaled lodoxamide tromethamine in the treatment of perennial asthma: a double-blind placebo-controlled study. J Allergy Clin Immunol. 1985 Jul;76(1):83-90.

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