Levocetirizine dihydrochloride

Cat. No.: HY-W010841

CAS No.: 130018-87-0

Molecular Formula: $C_{21}H_{27}Cl_3N_2O_3$

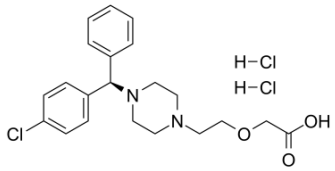
Molecular Weight: 461.81

Target: Histamine Receptor

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

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (216.54 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1654 mL	10.8270 mL	21.6539 mL
	5 mM	0.4331 mL	2.1654 mL	4.3308 mL
	10 mM	0.2165 mL	1.0827 mL	2.1654 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: ≥ 2.08 mg/mL (4.50 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.50 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 20.83 mg/mL (45.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Levocetirizine dihydrochloride ((R)-Cetirizine dihydrochloride) is a third-generation peripheral H1-receptor antagonist. Levocetirizine dihydrochloride is an antihistaminic agent which is the R-enantiomer of Cetirizine. Levocetirizine dihydrochloride has a higher affinity for the histamine H1-receptor than (S)-Cetirizine and can effectively treat allergic rhinitis and chronic idiopathic urticaria[1].

In Vivo

Levocetirizine (0.4 mg/kg; oral administration; male Sprague-Dawley rats) treatment shows that the C_{max}, AUC_{0-t}, $AUC_{0-\infty}$ and $t_{1/2}$ are 0.34 μg/mL, 3.26 μg h/mL, 3.67 μg h/mL and 2.34 hours, respectively in Sprague-Dawley rats[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	30 male Sprague-Dawley rats (8 weeks old; 200-250 g)[1]
Dosage:	0.4 mg/kg
Administration:	Oral administration (Pharmacokinetic Analysis)
Result:	The C_{max}, AUC_{0-t}, $AUC_{0-\infty}$ and $t_{1/2}$ were 0.34 μg/mL, 3.26 μg h/mL, 3.67 μg h/mL and 2.34 hours, respectively.

REFERENCES

[1]. Lohar P, et al. Simultaneous bioanalysis and pharmacokinetic interaction study of acebrophylline, levocetirizine and pranlukast in Sprague-Dawley rats. Biomed Chromatogr. 2019 Dec;33(12):e4672.

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