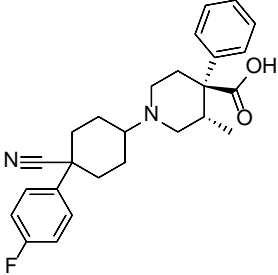


Product data sheet



MedKoo Cat#: 318097 Name: Levocabastine CAS: 79516-68-0 Chemical Formula: C ₂₆ H ₂₉ FN ₂ O ₂ Exact Mass: 420.2213 Molecular Weight: 420.5191		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.	
	In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

Levocabastine is a selective second-generation H1 receptor antagonists. It is used for allergic conjunctivitis. As well as acting as an antihistamine, levocabastine has also subsequently been found to act as a potent and selective antagonist for the neurotensin receptor NTS2, and was the first drug used to characterise the different neurotensin subtypes. This has made it a useful tool for the study of this receptor.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.38 mL	11.89 mL	23.78 mL
5 mM	0.48 mL	2.38 mL	4.76 mL
10 mM	0.24 mL	1.19 mL	2.38 mL
50 mM	0.05 mL	0.24 mL	0.48 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Asaoka R, Nakagami T, Zhu H, Liu Y, Hotta Y. The effect of levocabastine hydrochloride on human Tenon's capsule fibroblasts: inhibition of proliferation, suppression of DNA synthesis and induction of apoptosis. *Cutan Ocul Toxicol.* 2009;28(2):83-9. doi: 10.1080/15569520902937901. PMID: 19473114.
- Qasem AR, Bucolo C, Baiula M, Spartà A, Govoni P, Bedini A, Fasci D, Spampinato S. Contribution of alpha4beta1 integrin to the antiallergic effect of levocabastine. *Biochem Pharmacol.* 2008 Sep 15;76(6):751-62. doi: 10.1016/j.bcp.2008.07.007. Epub 2008 Jul 15. PMID: 18680729.

In vivo study

- Lores-Arnaiz S, Karadayian AG, Gutnisky A, Miranda J, Rodríguez de Lores Arnaiz G. Changes in synaptic proteins of the complex PSD-95/NMDA receptor/nNOS and mitochondrial dysfunction after levocabastine treatment. *Neurochem Int.* 2021 Sep;148:105100. doi: 10.1016/j.neuint.2021.105100. Epub 2021 Jun 15. PMID: 34139299.
- Gutnisky A, López Ordieres MG, Rodríguez de Lores Arnaiz G. The Administration of Levocabastine, a NTS2 Receptor Antagonist, Modifies Na(+), K(+)-ATPase Properties. *Neurochem Res.* 2016 Jun;41(6):1274-80. doi: 10.1007/s11064-015-1823-7. Epub 2016 Jan 7. PMID: 26738992.

Product data sheet



7. Bioactivity

Biological target:

Levocabastine is a selective second-generation H1 receptor antagonists.

In vitro activity

Levocabastine hydrochloride (10^{-4} M), ketotifen fumarate (3×10^{-5} M) and tranilast (10^{-4} M) significantly inhibited proliferation of fibroblasts. Levocabastine hydrochloride (10^{-4} M), ketotifen fumarate (10^{-4} M) and tranilast (10^{-3} M) inhibited DNA synthesis and induced apoptosis.

Reference: Cutan Ocul Toxicol. 2009;28(2):83-9. <https://pubmed.ncbi.nlm.nih.gov/19473114/>

In vivo activity

Male Wistar rats received a single (i.p.) dose of levocabastine (50 μ g/kg) or saline solution (controls) and were decapitated 18 h later. After levocabastine treatment, protein expression of PSD-95, GluN2B and β -actin decreased 97, 45 and 55%, respectively, whereas that of iNOS enhanced 3.5-fold versus controls. Results suggested that levocabastine administration induces alterations in synaptic proteins of the protein complex PSD-95/NMDA receptor/nNOS and in neuron cytoskeleton.

Reference: Neurochem Int. 2021 Sep;148:105100. <https://pubmed.ncbi.nlm.nih.gov/34139299/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.