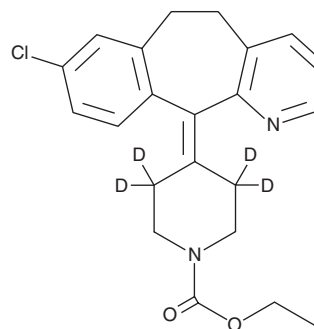


# PRODUCT INFORMATION



## Loratadine-d<sub>4</sub> Item No. 26759

**CAS Registry No.:** 2748435-73-4  
**Formal Name:** 4-(8-chloro-5,6-dihydro-11H-benzo[5,6]cyclohepta[1,2-b]pyridin-11-ylidene)-1-piperidine-3,3,5,5-d<sub>4</sub>-carboxylic acid, ethyl ester  
**MF:** C<sub>22</sub>H<sub>19</sub>ClD<sub>4</sub>N<sub>2</sub>O<sub>2</sub>  
**FW:** 386.9  
**Chemical Purity:** ≥98% (Loratadine)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Loratadine-d<sub>4</sub> is intended for use as an internal standard for the quantification of loratadine (Item No. 15625) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Loratadine-d<sub>4</sub> is supplied as a solid. A stock solution may be made by dissolving the loratadine-d<sub>4</sub> in the solvent of choice. Loratadine-d<sub>4</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of loratadine-d<sub>4</sub> in ethanol and DMF is approximately 30 mg/ml and approximately 25 mg/ml in DMSO.

### Description

Loratadine is a non-sedating antihistamine that acts as a selective inverse agonist of peripheral histamine H<sub>1</sub> receptors (K<sub>i</sub> = 35 nM).<sup>1-3</sup> It has been shown to inhibit the release of leukotriene C<sub>4</sub> (IC<sub>50</sub> = 8 μM) and histamine (IC<sub>50</sub> = 11 μM) from rodent mast cells and to inhibit allergic bronchospasm in guinea pigs with an ED<sub>50</sub> value of 0.40 mg/kg.<sup>4</sup> Formulations containing loratadine have been used in the treatment of allergic rhinitis and chronic idiopathic urticaria.

### References

1. Ahn, H.S. and Barnett, A. Selective displacement of [<sup>3</sup>H]mepyramine from peripheral vs. central nervous system receptors by loratadine, a non-sedating antihistamine. *Eur. J. Pharmacol.* **127(1-2)**, 153-155 (1986).
2. Kay, G.G. and Harris, A.G. Loratadine: A non-sedating antihistamine. Review of its effects on cognition, psychomotor performance, mood and sedation. *Clin. Exp. Allergy* **29(Suppl 3)**, 147-150 (1999).
3. Barnett, A., Iorio, L.C., Kreutner, W., et al. Evaluation of the CNS properties of SCH 29851, a potential non-sedating antihistamine. *Agents Actions* **43(3-4)**, 149-156 (1994).
4. Kreutner, W., Chapman, R.W., Gulbenkian, A., et al. Antiallergic activity of loratadine, a non-sedating antihistamine. *Allergy* **42(1)**, 57-63 (1987).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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