

PRODUCT INFORMATION



Montelukast-d₆ (sodium salt)

Item No. 22180

CAS Registry No.: 2673270-26-1

Formal Name: 1-[[[(1R)-1-[3-[(1E)-2-(7-chloro-2-quinolinyl)ethenyl]phenyl]-3-[2-[1-hydroxy-1-(methyl-d₃)ethyl-2,2,2-d₃]phenyl]propyl]thio]methyl]-cyclopropaneacetic acid, monosodium salt

Synonym: MK-476-d₆

MF: C₃₅H₂₉ClD₆NO₃S • Na

FW: 614.2

Chemical Purity: ≥95% (Montelukast (sodium salt))

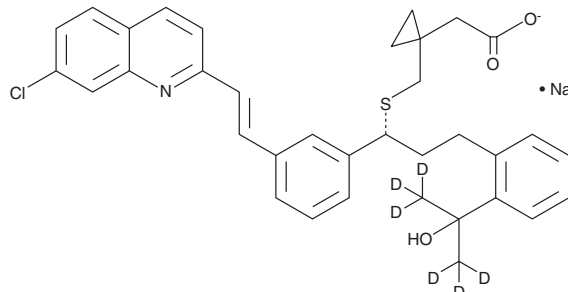
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀

Supplied as: A solid

Storage: 4°C

Stability: ≥4 years



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

Laboratory Procedures

Montelukast-d₆ (sodium salt) is intended for use as an internal standard for the quantification of montelukast (sodium salt) (Item No. 10008318) 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).

Montelukast-d₆ (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the montelukast-d₆ (sodium salt) in water. We do not recommend storing the aqueous solution for more than one day.

Description

Montelukast is a cysteinyl leukotriene 1 (CysLT₁) receptor antagonist (IC₅₀ = 4.9 nM in HEK293 cell membranes expressing the human receptor).¹ It is selective for CysLT₁ over CysLT₂ receptors (IC₅₀ = >10,000 nM in COS-7 cell membranes expressing the human receptor).² Montelukast inhibits bronchoconstriction induced by leukotriene D₄ (LTD₄; Item No. 20310) in anesthetized guinea pigs (ED₅₀ = 69 nmol/kg, p.o.).³ It inhibits ovalbumin-induced airway hyperresponsiveness and increases in the number of total cells and eosinophils in bronchoalveolar lavage fluid (BALF) in a mouse model of allergic asthma when administered at doses of 3 and 10 mg/kg.⁴ Formulations containing montelukast have been used in the treatment of asthma, allergic rhinitis, and exercise-induced bronchoconstriction.

References

1. Sarau, H.M., Ames, R.S., Chambers, J., *et al.* *Mol. Pharmacol.* **56**(3), 657-663 (1999).
2. Heise, C.E., O'Dowd, B.F., Figuerosa, D.J., *et al.* *J. Biol. Chem.* **275**(39), 30531-30536 (2000).
3. Cabré, F., Carabaza, A., García, A. M., *et al.* *Eur. J. Pharmacol.* **451**(3), 317-326 (2002).
4. Eum, S. Y., Maghni, K., Hamid, Q., *et al.* *Am. J. Respir. Cell Mol. Biol.* **28**(1), 25-32 (2003).

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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