

Product Name: Montelukast sodium

Catalog No.: 5904

Batch No.: 1

CAS Number: 151767-02-1

IUPAC Name: 1-[[[(1R)-1-[3-[(1E)-2-(7-Chloro-2-quinolinyl)ethenyl]phenyl]-3-[2-(1-hydroxy-1-methylethyl)phenyl]propyl]thio]methyl]cyclopropaneacetic acid sodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₅H₃₅ClNaO₃S.H₂O

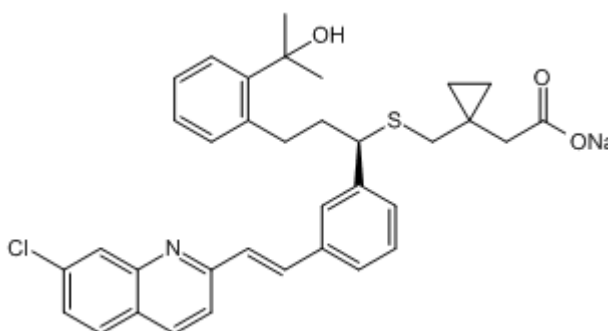
Batch Molecular Weight: 626.19

Physical Appearance: White solid

Solubility: water to 50 mM
DMSO to 100 mM
ethanol to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.6% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = +96.3 (Concentration = 1, Solvent = Methanol)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	67.13	5.96	2.24
Found	67.04	6.03	2.37

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Description:

Cysteinyl leukotriene receptor 1 (CysLT₁) and GPR17 antagonist. Blocks pentylene-tetrazole-induced seizures, blood brain barrier (BBB) disruption and leukocyte migration in mice. Reduces neuroinflammation, improves BBB integrity, enhances learning and memory, and restores hippocampal neurogenesis and cognitive function in aged rats. Orally active and brain penetrant.

Physical and Chemical Properties:

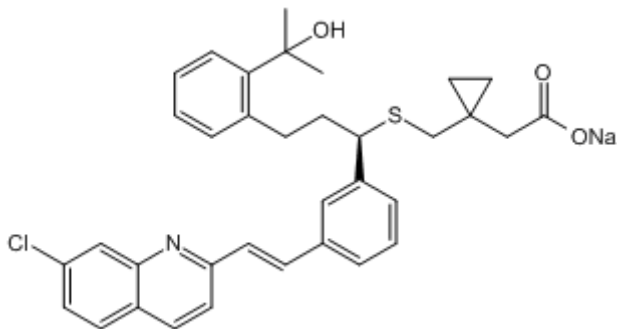
Batch Molecular Formula: C₃₅H₃₅ClNNaO₃S.H₂O

Batch Molecular Weight: 626.19

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 50 mM
DMSO to 100 mM
ethanol to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Marschallinger et al (2015) Structural and functional rejuvenation of the aged brain by an approved anti-asthmatic drug. *Nat. Commun.* **6** 8466. PMID: 26506265 .

Lenz et al (2014) Cysteinyl leukotriene receptor (CysLT) antagonists decrease pentylene-tetrazol-induced seizures and blood-brain barrier dysfunction. *Neuroscience* **277** 859. PMID: 25090924.

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