

Certificate of Analysis

Product Name: Meclizine dihydrochloride

Catalog No.: 4245

Batch No.: 1

CAS Number: 1104-22-9

EC Number: 214-164-8

IUPAC Name: 1-[(4-Chlorophenyl)phenylmethyl]4-[(3-methylphenyl)methyl]piperazine dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{25}H_{27}ClN_2 \cdot 2HCl \cdot 1\frac{1}{4}H_2O$

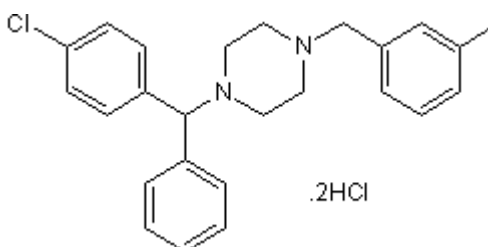
Batch Molecular Weight: 486.39

Physical Appearance: White solid

Solubility: DMSO to 50 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.2% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	61.74	6.53	5.76
Found	61.66	6.39	5.75

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Description:

Human pregnane X receptor (hPXR) agonist; stronger activator of hPXR than rat PXR. Increases hPXR target gene expression in human hepatocyte primary cultures. Also acts as a histamine H₁ receptor antagonist. Confers neuroprotection in models of polyQ toxicity.

Physical and Chemical Properties:

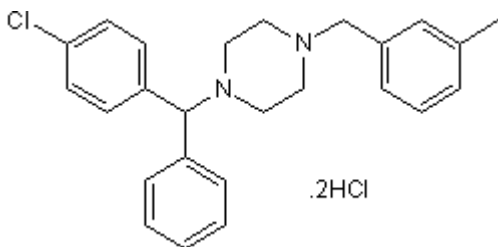
Batch Molecular Formula: C₂₅H₂₇ClN₂.2HCl.1¼H₂O

Batch Molecular Weight: 486.39

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

DMSO to 50 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:

Parada *et al* (2001) The major role of peripheral release of histamine and 5-hydroxytryptamine in formalin-induced nociception. *Neuroscience* **102** 937. PMID: 11182255.

Gohil *et al* (2010) Meclizine is neuroprotective in models of Huntington's disease. *Hum.Mol.Genet.* **20** 294. PMID: 20977989.

Lau *et al* (2011) Differential effect of meclizine on the activity of human pregnane X receptor and constitutive androstane receptor. *J.Pharmacol.Exp.Ther.* **336** 816. PMID: 21131266.

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