

Product Name: Diltiazem hydrochloride

Catalog No.: 0685

Batch No.: 5

CAS Number: 33286-22-5

EC Number: 251-443-3

IUPAC Name: (2*S-cis*)-3-(Acetyloxy)-5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-1,5-benzothiazepin-4(5*H*)-one hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₂₆N₂O₄S.HCl

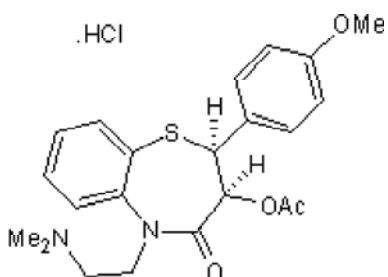
Batch Molecular Weight: 450.98

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.3% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = +96 (Concentration = 1, Solvent = Methanol)

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	58.59	6.03	6.21	7.86
Found	58.46	5.88	6.24	8.99

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956

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Description:

Diltiazem hydrochloride is an antihypertensive and cardioprotective agent; an inhibitor of L-type Ca²⁺ channels.

Physical and Chemical Properties:

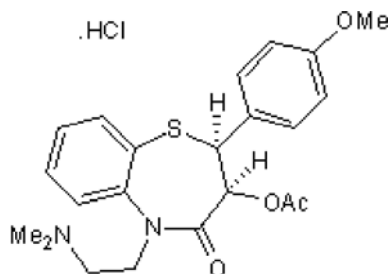
Batch Molecular Formula: C₂₂H₂₆N₂O₄S.HCl

Batch Molecular Weight: 450.98

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

water to 100 mM

DMSO 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:

Kraus et al (1998) Molecular mechanisms of dilt. interaction with L-type Ca²⁺ channels. *J.Biol.Chem.* **273** 27205. PMID: 9765241.

Gandia et al (1996) Inhibition of nicotinic receptor-mediated responses in bovine chromaffin cells by dilt. *Br.J.Pharmacol.* **118** 1301. PMID: 8818357.

Ishibashi et al (1995) Block of P-type Ca²⁺ channels in freshly dissociated rat cerebellar Purkinje neurons by dilt. and vera. *Brain Res.* **695** 88. PMID: 8574653.

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