

Certificate of Analysis

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Product Name: Amlodipine besylate

Catalog No.: 2571

Batch No.: 1

CAS Number: 111470-99-6

IUPAC Name: 2-[(2-Aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-3,5-pyridinedicarboxylic acid 3-ethyl 5-methyl ester benzenesulfonate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₂₅ClN₂O₅.C₆H₆O₃S

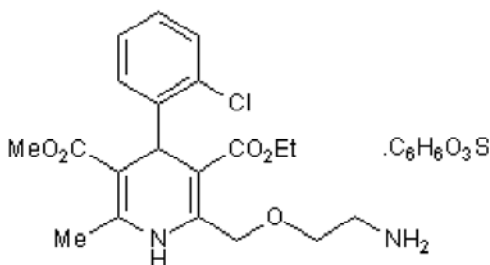
Batch Molecular Weight: 567.05

Physical Appearance: White solid

Solubility: DMSO to 100 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: Between 199 - 203°C

HPLC: Shows 99.4% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

Carbon Hydrogen Nitrogen

Theoretical 55.07 5.51 4.94

Found 55.18 5.47 4.95

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Product Information

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Description:

Amlodipine besylate is a L-type calcium channel blocker that displays antihypertensive properties. Inhibits Ca²⁺-induced contractions in depolarized rat aorta (IC₅₀ = 1.9 nM) and displays vasoprotective effects in cardiovascular disease. Inhibits proliferation of human vascular smooth muscle cells and epidermoid carcinoma A431 cells (IC₅₀ = 25 µM).

Physical and Chemical Properties:

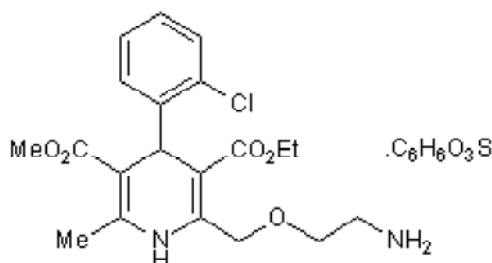
Batch Molecular Formula: C₂₀H₂₅ClN₂O₅·C₆H₆O₃S

Batch Molecular Weight: 567.05

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

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:

Toba *et al* (2005) Calcium channel blockades exhibit anti-inflammatory and antioxidative effects by augmentation of endothelial nitric oxide synthase and the inhibition of angiotensin converting enzyme in the NG-nitro-L-arginine methyl ester-induced hype Hypertens.Res. **28** 689. PMID: 16392774.

Yoshida *et al* (2003) Antiproliferative effect of Ca²⁺ channel blockers on human epidermoid carcinoma A431 cells. Eur.J.Pharmacol. **472** 23. PMID: 12860469.

Burges *et al* (1987) Calcium channel blocking properties of amlod. in vascular smooth muscle and cardiac muscle in vitro: evidence for voltage modulation of vascular dihydropyridine receptors. J.Cardiovasc.Pharmacol. **9** 110. PMID: 2434785.

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