Certificate of Analysis

Product Name: **Flunarizine dihydrochloride** **Catalog No.: 0522** **Batch No.: 5**

CAS Number: 30484-77-6 EC Number: 250-216-6

IUPAC Name: (*E*)-1-[*Bis*(4-fluorophenyl)methyl]-4-(3-phenyl-2-propenyl)piperazine dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{26}H_{26}F_2N_2.2HCl$

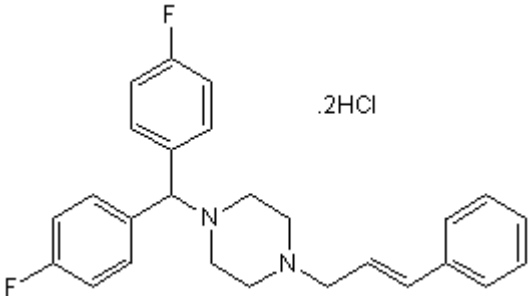
Batch Molecular Weight: 477.42

Physical Appearance: White solid

Solubility: ethanol to 5 mM
DMSO to 50 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	65.41	5.91	5.87
Found	65.27	5.91	5.97

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Description:

Dual Na^+/Ca^{2+} channel blocker; a cerebral and peripheral vasodilator. Neuroprotective.

Physical and Chemical Properties:

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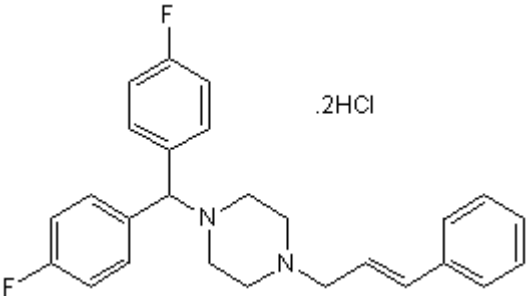
Physical Appearance: White solid

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

ethanol to 5 mM
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:

Pauwels *et al* (1991) Ca^+ and Na^+ channels involved in neuronal cell death - protection by flunarizine. Life.Sci. ***48*** 1881. PMID: 1850815.

Eichler *et al* (1994) The ability of diphenylpiperazines to prevent neuronal death in dorsal root ganglion neurons *in vitro* after axotomy. J.Neurochem. ***62*** 2148. PMID: 8189223.

Urenjak and Obrenovitch (1996) Pharmacological modulation of voltage gated Na^+ channels: a rational and effective strategy against ischemic brain damage. Pharmacol.Rev. ***48*** 21. PMID: 8685246.