

Certificate of Analysis

Product Name: SN-6

Catalog No.: 2184

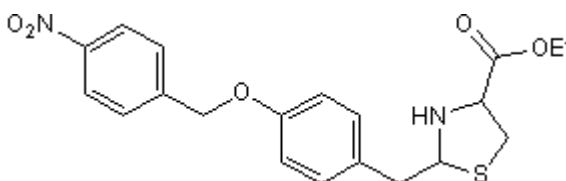
Batch No.: 2

CAS Number: 415697-08-4

IUPAC Name: 2-[[4-[(4-Nitrophenyl)methoxy]phenyl]methyl]-4-thiazolidinecarboxylic acid ethyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₂₂N₂O₅S
Batch Molecular Weight: 402.16
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Desiccate at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.54 (Ethyl acetate:Petroleum ether [1:1])
HPLC: Shows 99.3% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	59.69	5.51	6.96
Found	59.62	5.43	7.01

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

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Description:

Selective Na⁺/Ca²⁺-exchange (NCX) inhibitor; displays some selectivity for NCX1. IC₅₀ values are 2.9, 16 and 8.6 μM for inhibition of intracellular Na⁺-dependent ⁴⁵Ca²⁺ uptake by cells expressing NCX1, NCX2 and NCX3 respectively. Has some affinity for mACh receptors (IC₅₀ = 18 μM) but minimal activity against NCKX2 and various receptors and ion channels (IC₅₀ > 30 μM). Preferentially blocks Ca²⁺ influx mode and is more selective for NCX isoforms than KB-R7943 (Cat. No. 1244). Anti-ischemic; potently protects against hypoxia-induced renal tubular cell damage (IC₅₀ = 0.63 μM).

Physical and Chemical Properties:

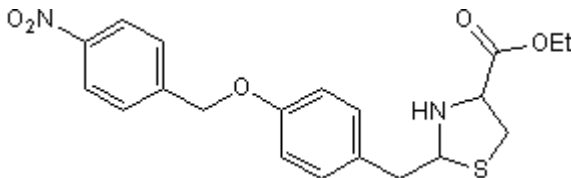
Batch Molecular Formula: C₂₀H₂₂N₂O₅S

Batch Molecular Weight: 402.16

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Iwamoto et al (2004) The exchanger inhibitory peptide region-dependent inhibition of Na⁺/Ca²⁺ exchange by SN-6 [2-[4-(4-nitrobenzyloxy)benzyl]thiazolidine-4-carboxylic acid ethyl ester], a novel benzyloxyphenyl derivative. *Mol.Pharmacol.* **66** 45. PMID: 15213295.

Iwamoto (2004) Forefront of Na⁺/Ca²⁺ exchanger studies: molecular pharmacology of N⁺/Ca²⁺ exchange inhibitors. *J.Pharmacol.Sci.* **96** 27. PMID: 15359084.

Storage: Desiccate at +4°C

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.

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