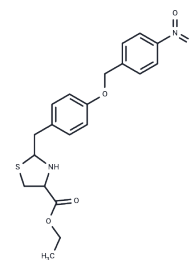


SN 6

Chemical Properties

CAS No. : 415697-08-4
Formula: C₂₀H₂₂N₂O₅S
Molecular Weight: 402.46
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	SN 6 (SN6) is a selective Na ⁺ /Ca ²⁺ exchanger (NCX) inhibitor (IC ₅₀ s of NCX1: 2.9 μM , NCX2: 16 μM ,NCX3: 8.6 μM)
Targets(IC ₅₀)	Calcium Channel,Na ⁺ /Ca ²⁺ Exchanger
In vitro	SN-6 [2-[4-(4-nitrobenzyloxy)benzyl]thiazolidine-4-carboxylic acid ethyl ester], a newly synthesized and selective Na ⁺ /Ca ²⁺ exchange (NCX) inhibitor. SN-6 (0.3-30 μM) inhibited preferentially intracellular Na ⁺ -dependent (45)Ca ²⁺ uptake (i.e., the reverse mode) compared with extracellular Na ⁺ -dependent (45)Ca ²⁺ efflux (i.e., the forward mode) in NCX1-transfected fibroblasts. SN-6 was 3- to 5-fold more inhibitory to (45)Ca ²⁺ uptake in NCX1 (IC ₅₀ = 2.9 μM) than to that in NCX2 or NCX3. SN-6 at lower doses (IC ₅₀ = 0.63 μM) potentially protected against hypoxia/reoxygenation-induced cell damage in renal tubular cells overexpressing NCX1, suggesting that this drug predominantly works under hypoxic/ischemic conditions. These properties of SN-6, which may be derived from its interaction with the XIP region, are advantageous to developing it as a new anti-ischemic drug.
Cell Research	Confluent transfectants in 24-well dishes were loaded with Na ⁺ by incubation at 37°C for 40 min in 0.5 ml of balanced salt solution (BSS) (10 mM HEPES/Tris, pH 7.4, 146 mM NaCl, 4 mM KCl, 2 mM MgCl ₂ , 0.1 mM CaCl ₂ , 10 mM glucose, and 0.1% bovine serum albumin) containing 1 mM ouabain and 10 mM monensin. ⁴⁵ Ca ²⁺ uptake was then initiated by switching the medium to Na ⁺ -free BSS (replacing NaCl with equimolar choline chloride) or to normal BSS, both of which contained 0.1 mM ⁴⁵ CaCl ₂ (370 kBq/ml) and 1 mM ouabain. After a 30-s incubation, ⁴⁵ Ca ²⁺ uptake was terminated by washing cells four times with an ice-cold solution containing 10 mM HEPES/Tris, pH 7.4, 120 mM choline chloride, and 10 mM LaCl ₃ . Cells were then solubilized with 0.1 N NaOH, and aliquots were taken for determination of radioactivity and protein. When present, SN-6 and KB-R7943 were included in the medium 15 min before the start of ⁴⁵ Ca ²⁺ uptake

Solubility Information

Solubility	H ₂ O: Insoluble, DMSO: 62.5 mg/mL (155.29 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	---

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4847 mL	12.4236 mL	24.8472 mL
5 mM	0.4969 mL	2.4847 mL	4.9694 mL
10 mM	0.2485 mL	1.2424 mL	2.4847 mL
50 mM	0.0497 mL	0.2485 mL	0.4969 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Iwamoto T, et al. 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

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only. Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 36 Washington Street, Wellesley Hills, MA 02481