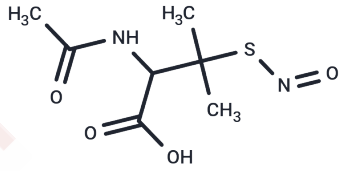
Data Sheet (Cat.No.T12808)

TargetMol

S-Nitroso-N-acetyl-DL-penicillamine

Chemical Properties



CAS No. : 67776-06-1

Formula: C7H12N2O4S

Molecular Weight: 220.25

Storage: Store at low temperature
Powder: -20°C for 3 years
Actual storage temperature shall be subject to the COA.

Biological Description

Description	S-Nitroso-N-acetyl-DL-penicillamine (SNAP) is a stable inhibitor of platelet aggregation and a nitric oxide donor.
Targets(IC50)	NO Synthase
In vitro	S-Nitroso-N-acetyl-DL-penicillamine (10 mM; 8 hours) induces approximately 80% toxicity under normoxic conditions by releasing nitric oxide (NO) after 6 hours [1]. It has a half-life of about 6 hours in isolated rat ventricular myocytes [3] and, at 100 μM for 30 minutes, causes a sustained decrease in basal pHi in these cells [3].

Solubility Information

Solubility	H2O: 3.45 mg/mL (15.66 mM),Sonication is recommended. DMSO: 250 mg/mL (1135.07 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (22.7 mM),Sonication is recommended. 10% DMSO+90% Saline: 10 mg/mL (45.4 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.5403 mL	22.7015 mL	45.403 mL
5 mM	0.9081 mL	4.5403 mL	9.0806 mL
10 mM	0.454 mL	2.2701 mL	4.5403 mL
50 mM	0.0908 mL	0.454 mL	0.9081 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

E. Salas, et al. Comparative pharmacology of analogues of S-nitroso-N-acetyl-DL-penicillamine on human platelets. Br J Pharmacol. 1994 Aug;112(4):1071-6.
Ioannidis I, et al. Enhanced release of nitric oxide causes increased cytotoxicity of S-nitroso-N-acetyl-DL-penicillamine and sodium nitroprusside under hypoxic conditions. Biochem J. 1996 Sep 15;318 (Pt 3):789-95.
Pravdic D, et al. Effect of nitric oxide donors S-nitroso-N-acetyl-DL-penicillamine, spermine NONOate and propylamine propylamine NONOate on intracellular pH in cardiomyocytes. Clin Exp Pharmacol Physiol. 2012 Sep;39(9):772-8.
Mang CF, et al. Modulation of acetylcholine release in the guinea-pig trachea by the nitric oxide donor, S-nitroso-N-acetyl-DL-penicillamine (SNAP). Br J Pharmacol. 2000 Sep;131(1):94-8.