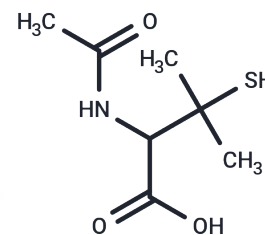


N-Acetyl-DL-penicillamine

Chemical Properties

CAS No. :	59-53-0
Formula:	C ₇ H ₁₃ NO ₃ S
Molecular Weight:	191.248
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	N-Acetyl-DL-penicillamine is a chelating agent.1,2,3It inhibits the binding of methyl mercury to isolated human erythrocytes by 50% and removes 50% of methyl mercury ions from methyl mercury-loaded blood cells when used at a concentration of 1 mM.1,2 N-Acetyl-DL-penicillamine (3 mmol/kg per day, p.o.) reduces the biological half-life of mercury and decreases liver, kidney, brain, and blood mercury levels, as well as increases urinary excretion of mercury in a concentration-dependent manner, in mice when administered following injection of methyl mercuric chloride. It decreases mercuric chloride-induced mortality in mice when administered orally at a dose of 1.6 mmol/kg.3N-Acetyl-DL-penicillamine is also an analog of SNAP that does not generate nitric oxide and has been used as a negative control in experiments using SNAP.4,5
Targets(IC50)	Others

Solubility Information

Solubility	DMF: 30 mg/mL (156.86 mM),Sonication is recommended. DMSO:PBS (pH 7.2) (1:7): 0.12 mg/mL (0.63 mM),Sonication is recommended. DMSO: 30 mg/mL (156.86 mM),Sonication is recommended. Ethanol: 5 mg/mL (26.14 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.2288 mL	26.1438 mL	52.2876 mL
5 mM	1.0458 mL	5.2288 mL	10.4575 mL
10 mM	0.5229 mL	2.6144 mL	5.2288 mL
50 mM	0.1046 mL	0.5229 mL	1.0458 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

- Aaseth, J. Mobilization of methyl mercury in vivo and in vitro using N-acetyl-DL-penicillamine and other complexing agents *Acta Pharm. Toxicol. (Copenh.)* 39(3)289-301(1976)
- Aaseth, J., Alexander, J., and Deverill, J. Evaluation of methyl mercury chelating agents using red blood cells and isolated hepatocytes *Chem. Biol. Interact.* 36(3)287-297(1981)
- Nielsen, J.B., and Andersen, O. Effect of four thiol-containing chelators on disposition of orally administered mercuric chloride *Hum. Exp. Toxicol.* 10(6)423-430(1991)
- Ogura, T., DeGeorge, G., Tatemichi, M., et al. Suppression of anti-microtubule agent-induced apoptosis by nitric oxide: Possible mechanism of a new drug resistance *Jpn. J. Cancer Res.* 89(2)199-205(1998)
- Takhampunya, R., Padmanabhan, R., and Ubol, S. Antiviral action of nitric oxide on dengue virus type 2 replication *J. Gen. Virol.* 87(Pt. 10)3003-3011(2006)

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