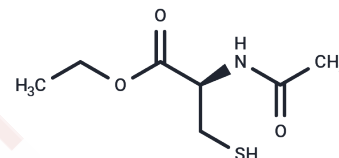


N-Acetyl-L-cysteine ethyl ester

Chemical Properties

CAS No. :	59587-09-6
Formula:	C7H13NO3S
Molecular Weight:	191.25
Appearance:	Solid
Storage:	store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	N-Acetyl-L-cysteine ethyl ester (NACET) is a derivative of the amino acid L-cysteine. NACET has been shown to exhibit diverse biochemical and physiological effects, including inhibition of protein synthesis, inhibition of DNA replication, and induction of apoptosis. Additionally, it has demonstrated anti-inflammatory, antioxidant, and anti-cancer activity.
Targets(IC50)	Antioxidant,Reactive Oxygen Species,ROS
In vitro	Under concomitant oxidative stress induced by 2 mM H2O2, N-Acetyl-L-cysteine ethyl ester (NACET) showed strong and significant protective effect on RPE cells when the concentration was 0.4 mM. Moreover, NACET treatment also resulted in an enhanced protective effect when RPE cells were stressed by the organic ROS generator peroxide tert-Butyl hydroperoxide (t-BOOH).NACET significantly increased both intracellular GSH and cysteine at 0.2 and 1 mM concentrations, respectively, as well as extracellular total GSH[2].

Solubility Information

Solubility	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (5.23 mM),Sonication is recommended. DMSO: 45 mg/mL (235.29 mM),Sonication is recommended. H2O: 90 mg/mL (470.59 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	--

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.

Reference

Giustarini D, et al. N-Acetylcysteine ethyl ester (NACET): a novel lipophilic cell-permeable cysteine derivative with an unusual pharmacokinetic feature and remarkable antioxidant potential. *Biochem Pharmacol.* 2012 Dec 1;84 (11):1522-33.

Tosi GM, et al. Superior Properties of N-Acetylcysteine Ethyl Ester over N-Acetyl Cysteine to Prevent Retinal Pigment Epithelial Cells Oxidative Damage. *Int J Mol Sci.* 2021 Jan 9;22(2):600.

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:34 Washington Street,Wellesley Hills,MA 02481