N-Acetyl-D-cysteine

Cat. No.: HY-136386

CAS No.: 26117-28-2

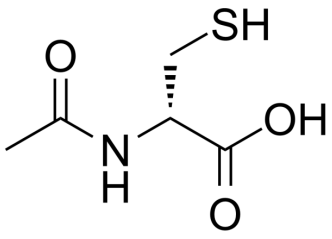
Molecular Formula: $C_5H_9NO_3S$

Molecular Weight: 163.19

Target: Reactive Oxygen Species

Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB

Storage: 4°C, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 250 mg/mL (1531.96 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	6.1278 mL	30.6391 mL	61.2783 mL
	5 mM	1.2256 mL	6.1278 mL	12.2557 mL
	10 mM	0.6128 mL	3.0639 mL	6.1278 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (612.78 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

N-Acetyl-D-cysteine has antioxidant activities and scavenges ROS through the reaction with its thiol group, but cannot enter the glutathione metabolic pathway[1].

In Vitro

N-Acetyl-D-cysteine (20 mM; 1 hour pretreatment; 12 hours) does not increase intracellular GSH levels, but GSH monoester does. D-NAC can not enhance hypoxic apoptosis. This demonstrate that GSH rather than D-NAC or NAC is responsible for enhancing hypoxic apoptosis[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Redox Biol. 2022 Aug;54:102392.

- Korean J Physiol Pharmacol. 2021 Mar 1;25(2):159-166.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Maika Deffieu, et al. Glutathione Participates in the Regulation of Mitophagy in Yeast.J Biol Chem. 2009 May 29;284(22):14828-37.

[2]. B K Wong,et al. Selective Effects of N-acetylcysteine Stereoisomers on Hepatic Glutathione and Plasma Sulfate in Mice. Toxicol Appl Pharmacol

[3]. Suparna Qanungo, et al. N-Acetyl-L-cysteine Enhances Apoptosis Through Inhibition of Nuclear factor-kappaB in Hypoxic Murine Embryonic Fibroblasts. J Biol Chem

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA