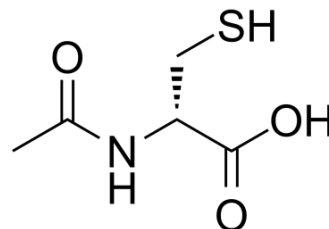


## N-Acetyl-D-cysteine

<b>Cat. No.:</b>	HY-136386
<b>CAS No.:</b>	26117-28-2
<b>Molecular Formula:</b>	C <sub>5</sub> H <sub>9</sub> NO <sub>3</sub> S
<b>Molecular Weight:</b>	163.19
<b>Target:</b>	Reactive Oxygen Species
<b>Pathway:</b>	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
<b>Storage:</b>	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 250 mg/mL (1531.96 mM; Need ultrasonic)				
	Solvent Concentration	Mass	1 mg	5 mg	10 mg
<b>Preparing Stock Solutions</b>	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.					
<b>In Vivo</b>	1. D-NAC was dissolved in physiological saline at a concentration of 6.13 mM (1 mg/ml), and pH adjusted to 7.5 by NaOH <sup>[2]</sup> .				

### BIOLOGICAL ACTIVITY

<b>Description</b>	N-Acetyl-D-cysteine has antioxidant activities and scavenges ROS through the reaction with its thiol group, but cannot enter the glutathione metabolic pathway <sup>[1]</sup> .
<b>In Vitro</b>	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 <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### CUSTOMER VALIDATION

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

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

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## REFERENCES

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- [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*
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**Caution: Product has not been fully validated for medical applications. For research use only.**