Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Acetylcysteine

Catalog No: tcsc2160

Available Sizes

Size: 5g

Size: 10g

Specifications

CAS No:
616-91-1

Formula:
$C_5H_9NO_3S$

Pathway:
Metabolic Enzyme/Protease

Target:
Endogenous Metabolite

Purity / Grade:
>98%

Solubility:
H2O : 50 mg/mL (306.39 mM; Need ultrasonic); DMSO : ≥ 130 mg/mL (796.62 mM)

Alternative Names:
N-Acetyl-L-cysteine;LNAC;NAC

Observed Molecular Weight:
163.19

Product Description

Acetylcysteine is used mainly as a mucolytic, which protects against acetaminophen overdose-induced hepatotoxicity by maintaining or restoring hepatic concentrations of glutathione.

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In Vitro: N-acetylcysteine prevents apoptotic DNA fragmentation and maintains long-term survival in the absence of other trophic support in serum-deprived PC12 cells. N-acetylcysteine also prevents death of PC12 cells and sympathetic neurons[2]. N-acetylcysteine causes dose-dependent reductions in viability in rat and human aortic smooth muscle cells[3]. N-acetylcysteine activates the Ras-extracellular signal-regulated kinase (ERK) pathway in PC12 cells. N-acetylcysteine protects neuronal cells from death evoked by withdrawal of trophic support. N-acetylcysteine increases nitric oxide (NO) release from protein-bound stores in vascular tissue. N-acetylcysteine pretreatment of PC12 cells interferes with NGF-dependent signaling and neurite outgrowth, and it is suggested that N-acetylcysteine interferes with redox-sensitive steps in the NGF mechanism[4].

In Vivo: N-acetylcysteine (150, 300 mg/kg) treatment significantly reduces liver transaminases in all groups of treatment, mostly in group N-acetylcysteine 300. Lung glutathione peroxidase is significantly increases in group N-acetylcysteine 300 (P=0.04), while the other oxidation biomarkers show no significant differences[1]. N-acetylcysteine improves cognition of 12-month-old SAMP8 mice in both the T-maze footshock avoidance paradigm and the lever press appetitive task without inducing non-specific effects on motor activity, motivation to avoid shock, or body weight[5].