



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

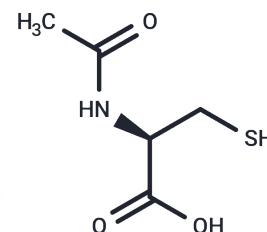
www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

Acetylcysteine

Chemical Properties

CAS No. :	616-91-1
Formula:	C ₅ H ₉ NO ₃ S
Molecular Weight:	163.19
Appearance:	no data available
Storage:	Powder: -20°C for 3 years



Biological Description

Description	Acetylcysteine (NAC) is an N-acetyl derivative of cysteine, a ROS inhibitor and mucolytic agent. Acetylcysteine induces apoptosis, can be used to reduce mucus thickness, and has anti-influenza viral activity.
Targets(IC50)	Apoptosis,TNF,Ferroptosis,Influenza Virus,Reactive Oxygen Species,ROS,Endogenous Metabolite
In vitro	<p>METHODS: Human bladder cancer cells T24 were treated with Acetylcysteine (5-50 mM) for 24 h. Cell viability was measured by MTT.</p> <p>RESULTS: Acetylcysteine dose-dependently inhibited the cell viability of T24 cells with an IC50 of 33.33 mM.[1]</p> <p>METHODS: Rat cardiomyocytes H9c2 were treated with Acetylcysteine (2-4 mM) for 12-24 h, and apoptosis was detected by Flow Cytometry.</p> <p>RESULTS: Acetylcysteine dose- and time-dependently induced apoptosis in H9c2 cells. [2]</p>
In vivo	<p>METHODS: To investigate the effects on apoptotic liver injury in mice, Acetylcysteine (150 mg/kg) was administered intraperitoneally to CD-1 mice as a single injection, and GalN/LPS was used to induce hepatic injury 30 min later.</p> <p>RESULTS: Acetylcysteine pretreatment significantly attenuated GalN/LPS-induced hepatocyte apoptosis.Acetylcysteine attenuates GalN/LPS-induced apoptotic liver injury through its potent ROS scavenging and anti-apoptotic effects. [3]</p> <p>METHODS: To assay in vivo activity, Acetylcysteine (500 mg/kg) was administered orally to R6/1 transgenic mice with Huntington's disease (HD) once daily for nine weeks.</p> <p>RESULTS: Chronic Acetylcysteine administration delayed the onset and development of motor deficits in R6/1 mice and also had antidepressant-like effects in both R6/1 and wild-type mice. [4]</p>
Cell Research	For survival experiments, washed cells are resuspended in RPM1 1640 medium and plated in 0.5 mL at a density of 8-10×10 ⁵ per well in 24 well plastic culture dishes coated with rat tail collagen. To feed, but to avoid loss of floating cells, fresh medium (0.2 mL) is added to the cultures on days 1, 5, and 10. For experiments involving 'primed' PC12 cells, cultures are pretreated for 1-2 weeks with NGF in RPM1 1640 medium supplemented with 1% heat-inactivated horse serum. The cells are then washed and passaged into serum-free RPM1 1640 medium.
Animal Research	Rats are randomly allocated into five groups: sham group (n=5), control group with IIR (n=8) and three groups with IIR who are given N-acetylcysteine in different dosages: 150 mg/kg intraperitoneally 5 min before ischemia (n=8, group N-acetylcysteine 150), 300

mg/kg i.p 5 min before ischemia (n=7, group N-acetylcysteine 300), and 150 mg/kg i.p 5 min before ischemia plus 150 mg/kg 5 min before reperfusion (n=7, group N-acetylcysteine 150 + 150). After 4 h of reperfusion, the animals are euthanized by exsanguination from the abdominal aorta.[1]

Solubility Information

Solubility	DMSO: 60 mg/mL (367.67 mM),The compound is unstable in solution, please use soon. Ethanol: 31 mg/mL (190 mM), H2O: 100 mg/ml (612.78 mM) ,Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	--

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.1226 mL	0.6128 mL	1.2256 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

Supabphol A, et al. N-acetylcysteine inhibits proliferation, adhesion, migration and invasion of human bladder cancer cells. J Med Assoc Thai. 2009 Sep;92(9):1171-7.
Tang Y, Song H, Wang Z, et al.Repurposing

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:36 Washington Street,Wellesley Hills,MA 02481