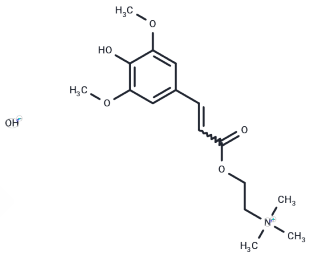
Data Sheet (Cat.No.T38606)

TargetMol

Sinapine hydroxide

Chemical Properties



CAS No. : 122-30-5

Formula: C16H25NO6

Molecular Weight: 327.377

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Sinapine hydroxide, an alkaloid derived from the seeds of cruciferous plants, demonstrates a variety of beneficial properties including anti-inflammatory, anti-oxidant, anti-tumor, anti-angiogenic, and radio-protective effects. Additionally, it acts as an inhibitor of acetylcholinesterase (AChE), making it valuable for researching neurodegenerative conditions such as Alzheimer's disease, ataxia, myasthenia gravis, and Parkinson's disease[4].
Targets(IC50)	Others,Cholinesterase (ChE),P-gp
In vitro	Sinapine (6 or 60 μM; 1 h) effectively mitigates mitochondrial oxidative stress in cardiomyocytes, triggered by H2O2 and antimycin A[1]. Additionally, at concentrations ranging from 10-200 μM over 24 hours, it suppresses Caco-2 cell proliferation dose-responsively with minimal toxicity, enhances doxorubicin uptake by reducing P-glycoprotein (P-gp) levels, and significantly diminishes FRS2α and ERK1/2 phosphorylation[3].
In vivo	Sinapine mitigates non-alcoholic fatty liver disease (NAFLD) in mice through alterations in gut microbiota composition[2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0546 mL	15.2728 mL	30.5455 mL
5 mM	0.6109 mL	3.0546 mL	6.1091 mL
10 mM	0.3055 mL	1.5273 mL	3.0546 mL
50 mM	0.0611 mL	0.3055 mL	0.6109 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Boulghobra D, et, al. Sinapine, but not sinapic acid, counteracts mitochondrial oxidative stress in cardiomyocytes. Redox Biol. 2020 Jul;34:101554.

Li Y, et, al. Sinapine reduces non-alcoholic fatty liver disease in mice by modulating the composition of the gut microbiota. Food Funct. 2019 Jun 19;10(6):3637-3649.

Guo Y, et, al. Sinapine as an active compound for inhibiting the proliferation of Caco-2 cells via downregulation of P-glycoprotein. Food Chem Toxicol. 2014 May;67:187-92.

Yates K, et, al. Determination of sinapine in rapeseed pomace extract: Its antioxidant and acetylcholinesterase inhibition properties. Food Chem. 2019 Mar 15;276:768-775.

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