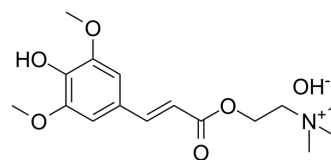


## Sinapine hydroxide

Cat. No.:	HY-N5077B
CAS No.:	122-30-5
Molecular Formula:	C <sub>16</sub> H <sub>25</sub> NO <sub>6</sub>
Molecular Weight:	327.37
Target:	AChE; P-glycoprotein
Pathway:	Neuronal Signaling; Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Sinapine hydroxide is an alkaloid isolated from seeds of the cruciferous species. Sinapine hydroxide exhibits anti-inflammatory, anti-oxidant, anti-tumor, anti-angiogenic and radio-protective effects. Sinapine hydroxide is also an acetylcholinesterase (AChE) inhibitor and can be used for the research of Alzheimer's disease, ataxia, myasthenia gravis, and Parkinson's disease <sup>[1][2][3][4]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	AChE <sup>[4]</sup> , P-gp <sup>[1]</sup>
<b>In Vitro</b>	<p>Sinapine (6 or 60 μM; 1 h) counteracts H<sub>2</sub>O<sub>2</sub> and antimycin A-induced mitochondrial oxidative stress in cardiomyocytes<sup>[1]</sup>.</p> <p>Sinapine (10-200 μM; 24 h) inhibits the proliferation of Caco-2 cells in a dose-dependent manner, and has relatively low toxicity<sup>[3]</sup>.</p> <p>Sinapine (10-200 μM; 24 h) promotes doxorubicin accumulation in Caco-2 cell by inducing P-glycoprotein (P-gp) decrease<sup>[3]</sup>.</p> <p>Sinapine (10-200 μM; 24 h) significantly reduces phosphorylation of FRS2α, ERK1/2<sup>[3]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
<b>In Vivo</b>	<p>Sinapine reduces non-alcoholic fatty liver disease in mice by modulating the composition of the gut microbiota<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

### CUSTOMER VALIDATION

- J Cancer. 2022 Jan 24;13(4):1229-1240.

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

### REFERENCES

- [1]. Boulghobra D, et, al. Sinapine, but not sinapic acid, counteracts mitochondrial oxidative stress in cardiomyocytes. Redox Biol. 2020 Jul;34:101554.
- [2]. 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.
- [3]. 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.

---

[4]. 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.

---

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

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