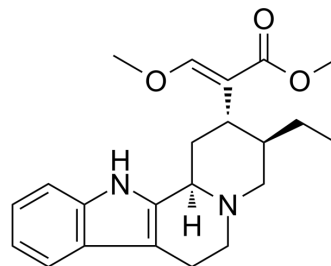


## Hirsutine

<b>Cat. No.:</b>	HY-N2193		
<b>CAS No.:</b>	7729-23-9		
<b>Molecular Formula:</b>	C <sub>22</sub> H <sub>28</sub> N <sub>2</sub> O <sub>3</sub>		
<b>Molecular Weight:</b>	368.47		
<b>Target:</b>	Apoptosis		
<b>Pathway:</b>	Apoptosis		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 100 mg/mL (271.39 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.7139 mL	13.5696 mL	27.1392 mL
	5 mM	0.5428 mL	2.7139 mL	5.4279 mL
	10 mM	0.2714 mL	1.3570 mL	2.7139 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

Hirsutine, an indole alkaloid of *Uncaria rhynchophylla*, exhibits anti-cancer activity. Hirsutine induces apoptosis and is a potent Dengue virus inhibitor exhibiting low cytotoxicity<sup>[1][2][3]</sup>.

#### In Vitro

Hirsutine remarkably reduces the viability of MCF-7 and MDA-MB-231 cells in a time- and dose-dependent manner with IC<sub>50</sub> values of 447.79 and 179.06 μM, respectively. In the MDA-MB-231 cells, Hirsutine induces apoptosis and depolarization of MMP, releases Cyt C from mitochondria, and activates caspase 9 and caspase 3<sup>[2]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

Hirsutine induces mPTP-dependent apoptosis through ROCK1/PTEN/PI3K/GSK3β pathway in human lung cancer cells<sup>[3]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

[1]. Hishiki T, et al. Hirsutine, an Indole Alkaloid of *Uncaria rhynchophylla*, Inhibits Late Step in Dengue Virus Lifecycle. *Front Microbiol.* 2017 Aug 30;8:1674.

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[2]. Huang QW, et al. [Hirsutine induces apoptosis of human breast cancer MDA-MB-231 cells through mitochondrial pathway]. Sheng Li Xue Bao. 2018 Feb 25;70(1):40-46.

[3]. Zhang R, et al. Hirsutine induces mPTP-dependent apoptosis through ROCK1/PTEN/PI3K/GSK3 $\beta$  pathway in human lung cancer cells. Cell Death Dis. 2018 May 22;9(6):598.

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

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