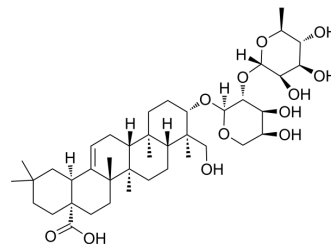


## alpha-Hederin

Cat. No.:	HY-N0255
CAS No.:	27013-91-8
Molecular Formula:	C <sub>41</sub> H <sub>66</sub> O <sub>12</sub>
Molecular Weight:	750.96
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	<div> <div>Powder</div> <div>-20°C    3 years</div> <div>4°C    2 years</div> </div> <div> <div>In solvent</div> <div>-80°C    2 years</div> <div>-20°C    1 year</div> </div>



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 100 mg/mL (133.16 mM)  
H<sub>2</sub>O : < 0.1 mg/mL (insoluble)  
\* "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		1.3316 mL	6.6581 mL	13.3163 mL
	5 mM		0.2663 mL	1.3316 mL	2.6633 mL
	10 mM		0.1332 mL	0.6658 mL	1.3316 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (3.33 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (3.33 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (3.33 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

alpha-Hederin (α-Hederin), a monodesmosidic triterpenoid saponin, exhibits promising antitumor potential against a variety of human cancer cell lines. alpha-Hederin could inhibit the proliferation and induce apoptosis of gastric cancer accompanied by glutathione decrement and reactive oxygen species generation via activating mitochondrial dependent pathway<sup>[1]</sup>.

<b>In Vitro</b>	alpha-Hederin ( $\alpha$ -Hederin) is cytotoxic and inhibits proliferation in both cell lines at rather low concentrations. alpha-Hederin ( $\alpha$ -Hederin) reduces the mitotic activity in treated cells <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	alpha-Hederin ( $\alpha$ -Hederin) has preventive effect on sensitized rats like thymoquinone. It may intervene in miRNA-126 expression, which consequently could interfere with IL-13 secretion pathway leading to a reduction in inflammatory responses <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Adv Sci (Weinh). 2025 Jul 16:e17278.
- Phytomedicine. 2025 Mar 8;141:156611.
- Naunyn Schmiedebergs Arch Pharmacol. 2025 Feb 19.

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## REFERENCES

- [1]. Danloy S et al. Effects of alpha-hederin, a saponin extracted from Hedera helix, on cells cultured in vitro. Planta Med, 1994 Feb, 60(1):45-9.
- [2]. Maryam Fallahi et al. Effect of Alpha-Hederin, the active constituent of Nigella sativa, on miRNA-126, IL-13 mRNA levels and inflammation of lungs in ovalbumin-sensitized male rats. Planta Med, 1994 Feb, 60(1):45-9.
- [3]. Wang J, et al.  $\alpha$ -Hederin induces the apoptosis of gastric cancer cells accompanied by glutathione decrement and reactive oxygen species generation via activating mitochondrial dependent pathway. Phytother Res. 2020;34(3):601-611.

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

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