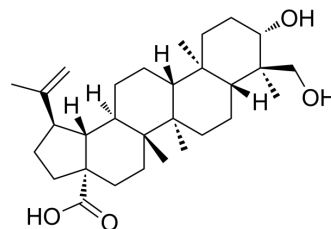


## 23-Hydroxybetulinic acid

Cat. No.:	HY-N0566
CAS No.:	85999-40-2
Molecular Formula:	C <sub>30</sub> H <sub>48</sub> O <sub>4</sub>
Molecular Weight:	472.7
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (211.55 mM; Need ultrasonic)				
	Preparing Stock Solutions	Solvent Concentration	Mass		
			1 mg	5 mg	10 mg
			1 mM	2.1155 mL	10.5775 mL
		5 mM	0.4231 mL	2.1155 mL	4.2310 mL
		10 mM	0.2116 mL	1.0578 mL	2.1155 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.29 mM); Clear solution				

### BIOLOGICAL ACTIVITY

Description	<p>23-hydroxybetulinic acid is one of the bioactive components responsible for its anticancer activity. In vitro: 23-hydroxybetulinic acid also shows different proliferation inhibitory activity against B16, HeLa, and HUVEC, with the IC<sub>50</sub> value of 78.5, 80, and 94.8 μM, respectively. 23-hydroxybetulinic acid can promote cell cycle arrest at S phase and induce apoptosis via intrinsic pathway. 23-hydroxybetulinic acid disrupts mitochondrial membrane potential significantly (p&lt;0.01) and selectively downregulates the levels of Bcl-2, survivin and upregulates Bax, cytochrome C, cleaved caspase-9. 23-hydroxybetulinic acid can induce apoptosis in K562 cells. [1] 23-hydroxybetulinic acid enhances sensitivity of doxorubicin (DOX, ADR) on MCF-7/ADR cell lines, indicating its potential to be developed as a novel MDR modulator. [2] 23-HBA significantly improve the sensitivity of the tumor to doxorubicin. [3]</p>
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### REFERENCES

[1]. Liu M et al. Cytotoxicity of the compounds isolated from Pulsatilla chinensis saponins and apoptosis induced by 23-hydroxybetulinic acid. Pharm Biol. 2015 Jan;53(1):1-

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[2]. Zhang DM et al. BBA, a derivative of 23-hydroxybetulinic acid, potently reverses ABCB1-mediated drug resistance in vitro and in vivo. *Mol Pharm.* 2012 Nov 5;9(11):3147-59.

[3]. Zheng Y et al. 23-Hydroxybetulinic acid from *Pulsatilla chinensis* (Bunge) Regel synergizes the antitumor activities of doxorubicin in vitro and in vivo. *J Ethnopharmacol.* 2010 Apr 21;128(3):615-22.

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

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