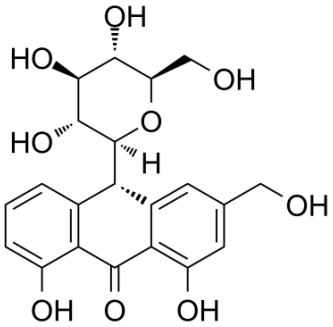
Aloin

Cat. No.:	HY-N0123		
CAS No.:	1415-73-2		
Molecular Formula:	$C_{21}H_{22}O_9$		
Molecular Weight:	418.39		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 27 mg/mL (64.53 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	2.3901 mL	11.9506 mL	23.9011 mL
	5 mM	0.4780 mL	2.3901 mL	4.7802 mL
	10 mM	0.2390 mL	1.1951 mL	2.3901 mL

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

In Vivo

1. Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
   Solubility: ≥ 2.08 mg/mL (4.97 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Aloin(Aloin-A; Barbaloin-A) is a natural antitumor anthraquinone glycoside with iron chelating and non-atherogenic activities.IC50 value:Target:in vitro: Aloin significantly inhibited HUVECs proliferation, migration and tube formation in vitro. suppressed activation of VEGF receptor (VEGFR) 2 and STAT3 phosphorylation in endothelial cells. In addition, the constitutively activated STAT3 protein, and the expression of STAT3-regulated antiapoptotic (Bcl-xL), proliferative (c-Myc), and angiogenic (VEGF) proteins were also down-regulated in response to AL in human SW620 cancer cells [1]. aloin exerted inhibition of cell proliferation, adhesion and invasion abilities of B16-F10 melanoma cells under non-cytotoxic concentrations. Furthermore, aloin induced melanoma cell differentiation through the enhancement of melanogenesis and transglutaminase activity [2].in vivo: Aloin substantially reduced tumor volumes and weight in vivo mouse xenografts, without obviously toxicity [1]. Aloin (10, 30 mg/kg bw) or vehicle was given by gavage to mice after each alcohol administration. Alcohol elevated the serum transaminases alanine aminotransferase, aspartate

	aminotransferase, total cholesterol and triglyceride levels which were significantly attenuated by the co-administration of aloin ($p < 0.05$) [3].

CUSTOMER VALIDATION

- **Arab J Chem**. 2020 Feb.
- **Int Immunopharmacol**. 2020, 107079.

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REFERENCES

[1]. Pan Q, et al. Inhibition of the angiogenesis and growth of Aloin in human colorectal cancer in vitro and in vivo. Cancer Cell Int. 2013 Jul 12;13(1):69.

[2]. Tabolacci C, et al. Aloin enhances cisplatin antineoplastic activity in B16-F10 melanoma cells by transglutaminase-induced differentiation. Amino Acids. 2013 Jan;44(1):293-300.

[3]. Cui Y, et al. Aloin protects against chronic alcoholic liver injury via attenuating lipid accumulation, oxidative stress and inflammation in mice. Arch Pharm Res. 2014 Dec;37(12):1624-33.

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