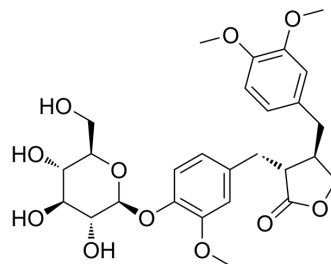


Arctiin

Cat. No.:	HY-N0034		
CAS No.:	20362-31-6		
Molecular Formula:	C ₂₇ H ₃₄ O ₁₁		
Molecular Weight:	534.55		
Target:	NF-κB		
Pathway:	NF-κB		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (467.68 mM; Need ultrasonic)
 H₂O : 10 mg/mL (18.71 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.8707 mL	9.3537 mL	18.7073 mL
	5 mM	0.3741 mL	1.8707 mL	3.7415 mL
	10 mM	0.1871 mL	0.9354 mL	1.8707 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 10 mg/mL (18.71 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (3.89 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (3.89 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (3.89 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Arctiin is an orally active inhibitor of NF-κB. Arctiin suppresses cyclin D1 protein expression in human tumor cells. Arctiin also reduces malondialdehyde and pro-inflammatory cytokines levels. Arctiin can used in study glomerulonephritis^{[4][6]}.

In Vitro

Arctiin (100 μM) down-regulates cyclin D1 protein expression in human tumor cells^[6].

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

Cell Differentiation Assay^[6]

Cell Line:	HaCaT, MG63, A549, HCT116, HeLa, MCF-7, and 293T cell line
Concentration:	10, 25, 100 and 250 μ M
Incubation Time:	0, 6, 12, 24 and 48 h
Result:	Inhibited the HaCaT cells growth with 100 μ M at 48 h. Significantly repressed the expression of the cyclin D1 protein with 100 μ M in all tumor cells. Dephosphorylated RB protein in HaCaT cells at 48 h.

In Vivo

Arctiin (120 mg/kg for p.o.; Once daily for 3 weeks) significantly improves cBSA-induced glomerulonephritis in glomerulonephritis rat model^[4].

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

Animal Model:	Glomerulonephritis rat model ^[4]
Dosage:	30, 60, and 120 mg/kg
Administration:	Oral gavage (p.o.); Once daily for 3 weeks
Result:	Significantly decreased the levels of urine protein. Markedly ameliorated the renal function. Dramatically reduced IL-6 and TNF- α concentration in rat serum. Dramatically decreased the NF- κ B DNA binding activity. Significantly reduced the MDA level and increased the SOD activity.

CUSTOMER VALIDATION

- Antioxidants (Basel). 2022, 11(12), 2347
- Planta Med. 2021 Feb 5.
- Prince of Songkla University. 2023 Dec.

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- [3]. Zeng Y, et al. Lack of significant modifying effect of arctiin on prostate carcinogenesis in probasin/SV40 T antigen transgenic rats. Cancer Lett. 2005 May 26;222(2):145-51.
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- [6]. Matsuzaki Y, et al. Arctiin induces cell growth inhibition through the down-regulation of cyclin D1 expression. Oncol Rep. 2008 Mar;19(3):721-7.

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

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