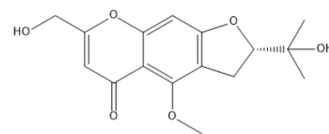


## Cimifugin

<b>Cat. No.:</b>	HY-N0634		
<b>CAS No.:</b>	37921-38-3		
<b>Molecular Formula:</b>	C <sub>16</sub> H <sub>18</sub> O <sub>6</sub>		
<b>Molecular Weight:</b>	306.31		
<b>Target:</b>	NF-κB		
<b>Pathway:</b>	NF-κB		
<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 (326.47 mM; Need ultrasonic)  
 H<sub>2</sub>O : 33.33 mg/mL (108.81 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.2647 mL	16.3233 mL	32.6467 mL
	5 mM	0.6529 mL	3.2647 mL	6.5293 mL
	10 mM	0.3265 mL	1.6323 mL	3.2647 mL

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

#### In Vivo

- Add each solvent one by one: PBS  
Solubility: 50 mg/mL (163.23 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (8.16 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (8.16 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (8.16 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Cimifugin (Cimitin) is a bioactive component of *Cimicifuga racemosa*, a Chinese herb. Cimifugin suppresses allergic inflammation by reducing epithelial derived initiative key factors via regulating tight junctions<sup>[1]</sup>. Cimifugin reduces the migration and chemotaxis of RAW264.7 cells and inhibits the release of inflammatory factors and activation of MAPKs and NF-κB signaling pathways induced by LPS<sup>[2]</sup>.

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<b>In Vitro</b>	The effect of Cimifugin (Cimitin) on TSLP decreases significantly when expression of CLDN1 is interfered with siRNA and this implied Cimifugin inhibits initiative cytokines through restoring TJJs <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Cimifugin (Cimitin; 12.5 or 50 mg/kg/day; intragastrically; 2 days) significantly inhibits TSLP and IL-33 in the initial stage of Mice are sensitized and challenged with FITC to establish type 2 atopic dermatitis (AD) model. Simultaneously, Cimifugin reduces the separated gap among the epithelial cells and increased the expression of TJJs <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

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- [1]. Han B, Dai Y, Wu H, et al. Cimifugin Inhibits Inflammatory Responses of RAW264.7 Cells Induced by Lipopolysaccharide. *Med Sci Monit.* 2019;25:409-417.
- [2]. Duan J, Hu X, Li T, Wu G, Dou P, Ouyang Z. Cimifugin Suppresses NF- $\kappa$ B Signaling to Prevent Osteoclastogenesis and Periprosthetic Osteolysis. *Front Pharmacol.* 2021;12:724256.
- [3]. Xiaoyu Wang, et al. Cimifugin suppresses allergic inflammation by reducing epithelial derived initiative key factors via regulating tight junctions. *J Cell Mol Med.* 2017 Nov;21(11):2926-2936.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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