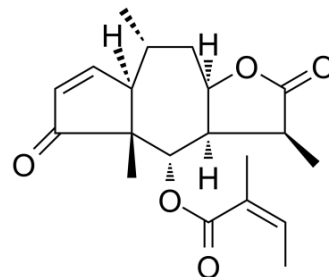


Brevilin A

Cat. No.:	HY-N2959		
CAS No.:	16503-32-5		
Molecular Formula:	C ₂₀ H ₂₆ O ₅		
Molecular Weight:	346.42		
Target:	JAK; STAT; Apoptosis; Autophagy		
Pathway:	Epigenetics; JAK/STAT Signaling; Stem Cell/Wnt; Apoptosis; Autophagy		
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 : 100 mg/mL (288.67 mM; Need ultrasonic)

Concentration	Solvent	Mass	1 mg			5 mg			10 mg		
			Concentration			Concentration			Concentration		
1 mM			2.8867 mL			14.4333 mL			28.8667 mL		
5 mM			0.5773 mL			2.8867 mL			5.7733 mL		
10 mM			0.2887 mL			1.4433 mL			2.8867 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: ≥ 6.25 mg/mL (18.04 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 10 mg/mL (28.87 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 6.25 mg/mL (18.04 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Brevilin A is a sesquiterpene lactone isolated from *Centipeda minima* with anti-tumor activity. Brevilin A is a selective inhibitor of JAK-STAT signal pathway by attenuating the JAKs activity and blocking STAT3 signaling (IC₅₀ = 10.6 μM) in Cancer Cells. Brevilin A induces apoptosis and autophagy via mitochondrial pathway and PI3K/AKT/mTOR inactivation in colon adenocarcinoma cell CT26^{[1][2]}.

IC₅₀ & Target

IC₅₀: 10.6 μM (STAT3 signaling)^[1]

REFERENCES

- [1]. Chen X, et al. Brevilin A, a novel natural product, inhibits janus kinase activity and blocks STAT3 signaling in cancer cells. PLoS One. 2013 May 21;8(5):e63697.
- [2]. You P, et al. Brevilin A induces apoptosis and autophagy of colon adenocarcinoma cell CT26 via mitochondrial pathway and PI3K/AKT/mTOR inactivation. Biomed Pharmacother. 2018 Feb;98:619-625.
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Caution: Product has not been fully validated for medical applications. For research use only.

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