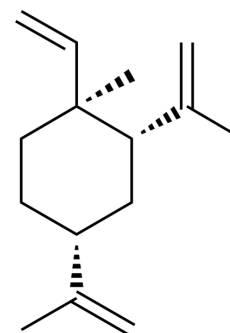


β-Elemene

Cat. No.:	HY-107324
CAS No.:	515-13-9
Molecular Formula:	C ₁₅ H ₂₄
Molecular Weight:	204.35
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	4°C, stored under nitrogen
	* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	Ethanol : 50 mg/mL (244.68 mM; Need ultrasonic)					
	DMSO : 50 mg/mL (244.68 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		4.8936 mL	24.4678 mL	48.9356 mL
5 mM			0.9787 mL	4.8936 mL	9.7871 mL	
10 mM		0.4894 mL	2.4468 mL	4.8936 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: ≥ 2.5 mg/mL (12.23 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (12.23 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (12.23 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	β-Elemene ((-)-β-Elemene; Levo-β-elemene) is isolated from natural plant <i>Curcuma aromatica</i> with an antitumor activity. β-Elemene can induce cell apoptosis.
In Vitro	β-Elemene (0-200 μg/ml; 24 hours) shows IC ₅₀ values of 72.8 μg/ml; 47.4 μg/ml; 61.5 μg/ml; 3.661 μg/ml; 68 μg/ml; 72.12 μg/ml; 37.894 μg/ml and 37.703 μg/ml for SV-HUC-1, T24, 5637, TCCSUP, J82,UMUC-3,RT4, and SW780 cells, respectively ^[1] . ?β-Elemene (0-75 μg/ml; 24 hours) decreases cell number from 50 μg/ml and is notably decreased at 75 μg/ml, ?induces dose-dependent G1-phase arrest in T24cells and significantly reduces the percentage of cells in the S-phase ^[1] . ?β-Elemene (50 μg/ml; 12 hours) downregulates the expression levels of p-STAT3 and the cell cycle-related proteins cyclin

D1, CDK4 and CDK6, and upregulates p21 and p27 expression in T24 cells^[1].

β -Elemene (50 μ g/ml; 24 hours) enhances cisplatin-induced apoptosis by activating the ROS-AMPK signaling pathway^[1].

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

Cell Viability Assay^[2]

Cell Line:	T24, 5637, TCCSUP, J82, UM-UC-3, RT4 and SW780 cells
Concentration:	0, 6.25, 12.5, 25, 50, 100, 150 and 200 μ g/ml
Incubation Time:	24 hours
Result:	Inhibited the proliferation of RT4, SW780, J82, UMUC-3, TCCSUP, 5637 and T24 human bladder cancer cells and SV-HUC-1 human urothelial cells.

Cell Cycle Analysis^[2]

Cell Line:	T24 and 5637 cells
Concentration:	0, 25, 50 and 75 μ g/ml
Incubation Time:	24 hours
Result:	Induced the percentage of cells in the S-phase as a dose-dependent manner.

Western Blot Analysis^[2]

Cell Line:	T24 cells
Concentration:	50 μ g/ml
Incubation Time:	24 hours
Result:	Downregulated p-STAT3 and cell cycle-related proteins.

CUSTOMER VALIDATION

- Sci Rep. 2023 Jul 27;13(1):12160.
- IUBMB Life. 2022 Jun;74(6):508-518.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Ross, S.A., and ElSohly, M.A. The volatile oil composition of fresh and air-dried buds of Cannabis sativa. J. Nat. Prod. 59(1), 49-51 (1996).

[2]. Gan D, et al. β -elemene enhances cisplatin-induced apoptosis in bladder cancer cells through the ROS-AMPK signaling pathway. Oncol Lett. 2020 Jan;19(1):291-300.

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

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