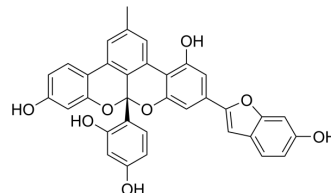


Albanol B

Cat. No.:	HY-N11439
CAS No.:	87084-99-9
Molecular Formula:	C ₃₄ H ₂₂ O ₈
Molecular Weight:	558.53
Target:	CDK; Akt; ERK; Apoptosis; Bacterial
Pathway:	Cell Cycle/DNA Damage; PI3K/Akt/mTOR; MAPK/ERK Pathway; Stem Cell/Wnt; Apoptosis; Anti-infection
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description

Albanol B is an arylbenzofuran derivative which can be isolated from mulberries. Albanol B exhibits anti-Alzheimer's disease, anti-bacterial and antioxidant activities. Albanol B inhibits cancer cells proliferation, down-regulates CDK1 expression. Albanol B also induces cell cycle arrest at G2/M and apoptosis. And Albanol B induces mitochondrial ROS production and increases the phosphorylation levels of AKT and ERK1/2^[1].

In Vitro

Albanol B (10 μM, 30 μM; 24 h) decreases cell viability of A549 cells^[1].
Albanol B (30 μM; 48 h) arrests cell cycle at G2/M phase and induces apoptosis in A549 and H1975 cells^[1].
Albanol B (1-30 μM; 1-9 h) mediates the activation of ERK-1/2 and AKT in A549 cells^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay^[1]

Cell Line:	A549 cells, BZR, NCI-H1975, and NCI-H226 cells
Concentration:	0, 1, 3, 10, and 30 μM
Incubation Time:	48 hours
Result:	Exhibited inhibitory effects on cancer cells with IC ₅₀ s of 5.6 μM (A549), 8.9 μM (BZR), 12.7 μM (NCI-H1975), and 15 μM (NCI-H226), respectively.

Cell Cycle Analysis^[1]

Cell Line:	A549 and H1975 cells
Concentration:	1, 3, 10 μM
Incubation Time:	48 hours
Result:	Increased cells in G2/M phase from 9.5% to 14.34%, 18.13% and 47.9%, respectively.

Western Blot Analysis^[1]

Cell Line:	A549 cells
Concentration:	1 h, 3 h, 6 h, and 9 h

	Incubation Time:	48 hours
	Result:	Increased the phosphorylation levels of ERK1/2 and AKT in time- and concentration-dependent manners. Did not increase the phosphorylation level of JNK and p38 MAPKs.
In Vivo	Albanol B (50 mg/kg, 100 mg/kg; ip; once daily for 21 days) inhibits tumor growth in Ex-3LL tumor bearing mice ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	EX-3LL tumor-bearing mice ^[1]
	Dosage:	50 mg/kg, 100 mg/kg
	Administration:	IP; once daily for 21 days
	Result:	Decreased tumor volume and weight by 48.0% and 41.0% (for 50 mg/kg treatment), and 61.3% and 57.3% (for 100 mg/kg treatment), respectively.

REFERENCES

[1]. Phan TN, et al. Albanol B from Mulberries Exerts Anti-Cancer Effect through Mitochondria ROS Production in Lung Cancer Cells and Suppresses In Vivo Tumor Growth. Int J Mol Sci. 2020 Dec 14;21(24):9502.

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

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