# Jolkinolide A

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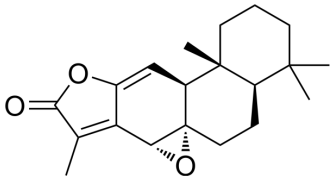
| **Cat. No.:** | HY-119767 |
| **CAS No.:** | 37905-07-0 |
| **Molecular Formula:** | $C_{20}H_{26}O_3$ |
| **Molecular Weight:** | 314.42 |
| **Target:** | VEGFR; Apoptosis |
| **Pathway:** | Protein Tyrosine Kinase/RTK; Apoptosis |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |



## BIOLOGICAL ACTIVITY

**Description**

Jolkinolide A is a diterpenoid, can be extracted from the roots of Euphorbia fischeriana Steud. Jolkinolide A exhibits anti-tumor activity, by affecting on angiogenesis of tumor tissues. Jolkinolide A significantly inhibits the Akt-STAT3-mTOR signaling pathway and reduces the expression of VEGF in A549 cells[1].

**$IC_{50}$ & Target**

VEGF[1]

**In Vitro**

Jolkinolide A (20-100 μg/mL; 24 h) increases the protein level of caspase-9 in A549 cells[1].
Jolkinolide A (40-80 μg/mL; 24 h) reduces the expression of Akt-STAT3-mTOR proteins in A549 cells[1].
Jolkinolide A (20-100 μg/mL; 24 h) inhibits human umbilical vein endothelial cells (HUVECs) proliferation and migration, and promotes apoptosis[1].

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

Western Blot Analysis[1]

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| Cell Line: | A549 cells |
| Concentration: | 20 μg/mL, 40 μg/mL, 60 μg/mL, 80 μg/mL, and 100 μg/mL |
| Incubation Time: | 24 hours |
| Result: | Promoted caspase-9 protein expression in cells at 20-100 μg/mL.Inhibited expression levels of Akt, STAT3, and mTOR proteins in cells at 40-80 μg/mL. |

**In Vivo**

Jolkinolide A (40 mg/kg; i.p.; once every 3 days, for 2 months) inhibits the expression of the VEGF protein in A549 cell xenograft tumor model in mouse[1].

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

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| Animal Model: | Female BALB/c nude mice (4-5 weeks old) injected with A549 cells[1] |
| Dosage: | 40 mg/kg |
| Administration: | Intraperitoneal injection; once every 3 days for 2 months |
| Result: | Significantly inhibited the expression of VEGF protein on the first, 10th, 30th, 45th, and |

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| | 60th day of administration. |

## REFERENCES

[1]. Shen L, et al. Jolkinolide A and Jolkinolide B Inhibit Proliferation of A549 Cells and Activity of Human Umbilical Vein Endothelial Cells. Med Sci Monit. 2017 Jan 14;23:223-237.



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