Glochidiol

Cat. No.: HY-N3950

CAS No.: 6610-56-6

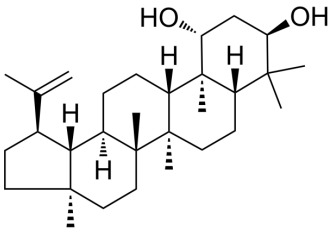
Molecular Formula: $C_{30}H_{50}O_2$

Molecular Weight: 442.72

Target: Microtubule/Tubulin

Pathway: Cell Cycle/DNA Damage; Cytoskeleton

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Glochidiol is an orally active tubulin polymerization inhibitor with an IC_{50} of 2.76 μM. Glochidiol shows anti-cancer activity[1].
IC_{50} & Target	IC50: 2.76 μM (tubulin polymerization)[1]

In Vitro

Glochidiol (1-8 μM; 48 h) shows potent antiproliferative activity against lung cancer cell lines in a concentration-dependent manner[1].

Glochidiol interacts with tubulin by targeting the colchicine binding site[1].

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

Cell Proliferation Assay[1]

Cell Line:	NCI-H2087, HOP-62, NCI-H520, HCC-44, HARA, EPLC-272H, NCI-H3122, COR-L105 and Calu-6
Concentration:	1, 2, 4 and 8 μM
Incubation Time:	48 h
Result:	Showed potent antiproliferative activity against lung cancer cell lines NCI-H2087, HOP-62, NCI-H520, HCC-44, HARA, EPLC-272H, NCI-H3122, COR-L105 and Calu-6 with IC_{50} values of 4.12 μM, 2.01 μM, 7.53 μM, 1.62 μM, 4.79 μM, 7.69 μM, 2.36 μM, 6.07 μM and 2.10 μM, respectively.

In Vivo

Glochidiol (60 mg/kg/day; i.g.; 21 days) effectively inhibits lung cancer HCC-44 xenograft tumor growth in nude mice[1].

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Animal Model:	BALB/c nude mice bearing HCC-44 xenografts[1]
Dosage:	60 mg/kg/day
Administration:	Intragastric administration for a period of 21 days
Result:	Decreased average tumor weight and relative tumor volume with no obvious cytotoxic effect on the major organs, including heart, liver, and kidney.

REFERENCES

[1]. Chen H, et al. Glochidiol, a natural triterpenoid, exerts its anti-cancer effects by targeting the colchicine binding site of tubulin. Invest New Drugs. 2021 Apr;39(2):578-586.

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