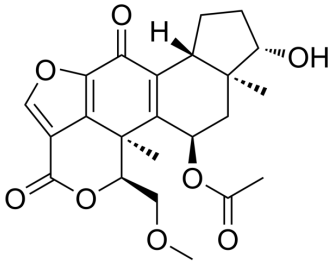
17β-Hydroxywortmannin

Cat. No.:	HY-126083
CAS No.:	58053-83-1
Molecular Formula:	$C_{23}H_{26}O_8$
Molecular Weight:	430.45
Target:	PI3K
Pathway:	PI3K/Akt/mTOR
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	17β-Hydroxywortmannin (Wortmannin-17β-ol) is an orally active inhibitor for phosphatidylinositol-3-kinase (PI-3-kinase) with an IC_{50} of 0.5 nM, suppresses the osteoclast resorption with an IC_{50} of 10 nM[1]. 17β-Hydroxywortmannin exhibits antitumor activity[2].
IC_{50} & Target	PI3K 0.5 nM (IC_{50})
In Vivo	17β-Hydroxywortmannin (0.1 μg/kg, p.o. for 5 weeks) exhibits activity in osteoclast differentation and prevent an estrogen-deficiency induced bone loss in ovafiectomized OVX rats[1]. 17β-Hydroxywortmannin (2.5 mg/kg/week, i.v. for 2 weeks) exhibits antitumor efficacy towards U87MG glioma with a therapeutic index of 2^6 in human tumor xenografted nude mice[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	ovafiectomized rat[1]
Dosage:	0.1 μg/kg/day
Administration:	p.o. for 5 weeks
Result:	Reduced the bone loss without significant toxicity.

Animal Model:	U87MG glioma xenografted nude mice[2]
Dosage:	2.5 mg/kg/week
Administration:	i.v. for 2 weeks
Result:	Inhibited tumor growth.

REFERENCES

[1]. Hall TJ, et al., Wortmannin, a potent inhibitor of phosphatidylinositol 3-kinase, inhibits osteoclastic bone resorption in vitro. Calcif Tissue Int. 1995 Apr;56(4):336-8.

[2]. Zask A, et al., Synthesis and structure-activity relationships of ring-opened 17-hydroxywortmannins: potent phosphoinositide 3-kinase inhibitors with improved properties and anticancer efficacy. J Med Chem. 2008 Mar 13;51(5):1319-23.

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