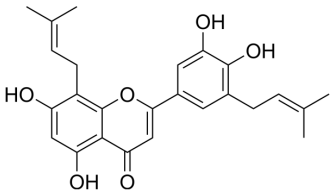
Epimedokoreanin B

Cat. No.:	HY-N3831
CAS No.:	161068-53-7
Molecular Formula:	$C_{25}H_{26}O_6$
Molecular Weight:	422.47
Target:	Bacterial; Apoptosis
Pathway:	Anti-infection; Apoptosis
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description

Epimedokoreanin B is a natural flavonoid with anticancer, anti-inflammatory and antibacterial effects. Epimedokoreanin B inhibits the growth of lung cancer cells through endoplasmic reticulum stress-mediated apoptosis accompanied by autophagosome accumulation. Epimedokoreanin B is an anti-periodontitis agent that inhibits gingipains and ***Porphyromonas gingivalis*** growth and biofilm formation[1][2][3].

In Vitro

Epimedokoreanin B (compound6; 3.13-25 μM; 48 hours) shows significate inhibitory effect on proliferation against lung cancer cell A549, Calu1 and H1299. Epimedokoreanin B displays no toxic on human bronchial epithelial cells BEAS-2B[1] .Epimedokoreanin B treatment inhibits cell proliferation and migration accompanied by cytoplasmic vacuolation in A549 and NCI-H292 cells. Atophagosome accumulation accompanied with autophagy flux blocking is observed in Epimedokoreanin B treated cells, this was consistent with the occurrence of ER stress[2].
Epimedokoreanin B (5 μM; 24 hours) inhibits CD163 expression and IL-10 production, which are known M2 markers, suggesting that Epimedokoreanin B inhibits M2 polarization in human monocyte-derived macrophages (HMDMs). Epimedokoreanin B suppresses STAT3 activation in HMDMs[4].

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

Cell Cytotoxicity Assay[1]

Cell Line:	A549, Calu1 and H1299 cells
Concentration:	3.13 μM, 6.25 μM, 12.5 μM and 25.0 μM
Incubation Time:	48 hours
Result:	Showed significate inhibitory effect on proliferation against lung cancer cell A549, Calu1 and H1299.

Western Blot Analysis[4]

Cell Line:	Human monocyte-derived macrophages (HMDMs)
Concentration:	5 μM
Incubation Time:	24 hours
Result:	Significantly suppressed IL-10-induced JAK1/STAT3 activation.and H1299.

In Vivo

Epimedokoreanin B (20 mg/kg; p.o; thrice a week; for 17 days) inhibits tumor growth in an LM8 tumor-bearing murine model [4].

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Animal Model:	Female C3H mice (8-10 weeks old) injected with LM8 cells[4]
Dosage:	20 mg/kg
Administration:	Oral administration; thrice a week; for 17 days
Result:	Inhibited tumor growth.

REFERENCES

[1]. Huaran Zhang, et al. Flavonoids from the leaves of Epimedium Koreanum Nakai and their potential cytotoxic activities. Nat Prod Res. 2020 May;34(9):1256-1263.

[2]. Hao Zheng, et al. Epimedokoreanin B inhibits the growth of lung cancer cells through endoplasmic reticulum stress-mediated paraptosis accompanied by autophagosome accumulation. Chem Biol Interact. 2022 Oct 1;366:110125.

[3]. T Kariu, et al. Inhibition of gingipains and Porphyromonas gingivalis growth and biofilm formation by prenyl flavonoids. J Periodontal Res. 2017 Feb;52(1):89-96.

[4]. Cheng Pan , et al. Flavonoid Compounds Contained in Epimedii Herba Inhibit Tumor Progression by Suppressing STAT3 Activation in the Tumor Microenvironment. Front Pharmacol. 2020 Mar 18;11:262.

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