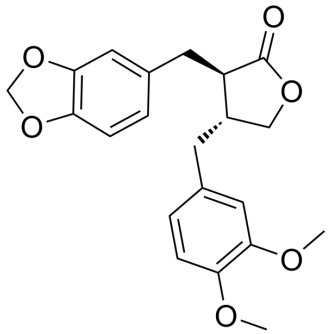
Kusunokinin

Cat. No.:	HY-N10798
CAS No.:	58311-20-9
Molecular Formula:	$C_{21}H_{22}O_6$
Molecular Weight:	370.4
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Kusunokinin ((-)-Kusunokinin) is a nature product that could be isolated form P. nigrum. Kusunokinin has anticancer activity. Kusunokinin arrests cell cycle at G2/M phase and induce apoptosis[1].

In Vitro

Kusunokinin ((-)-Kusunokinin; 0.625-10 μg/mL; 72 h) inhibits the viability of cancer cells with IC_{50} values of 3.08, 3.59, 3.98, 5.75, 5.77, 7.86 μM for MCF-7, HT-29, MDA-MB-468, SW-620, A-549, MDA-MB-231 cells, respectively[1].

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

Cell Viability Assay[1]

Cell Line:	Cancer cells
Concentration:	0.625, 1.25, 2.5, 5 and 10 μg/mL
Incubation Time:	72 hours
Result:	Had anticancer activity and inhibited cancer cells growth.

In Vivo

Kusunokinin ((-)-Kusunokinin; 7 and 14 mg/kg; i.h.; 3 times a week for 2 weeks) attenuates tumor growth in NMU-induced breast cancer rats through the down-regulation of signaling molecules (c-Src, PI3K, Akt and Erk1/2)[1].

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Animal Model:	Female Sprague Dawley rats (7 weeks of age)[1]
Dosage:	7 and 14 mg/kg
Administration:	Subcutaneous injection, 3 times a week for 2 weeks
Result:	Inhibited the mammary tumor growth and decreased tumor volume. Down-regulated c-Src, Erk1/2 and PI3K proteins and decreased Akt proteins. Inhibited downstream molecules in the cell cycle (c-Myc, E2f-1, CDK1 and cyclin B1) and metastasis (E-cadherin, MMP-2 and MMP-9).

REFERENCES

[1]. Tedasen A, et, al. (-)-Kusunokinin inhibits breast cancer in N-nitrosomethylurea-induced mammary tumor rats. Eur J Pharmacol. 2020 Sep 5;882:173311.

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