Xanthoxyletin

Cat. No.: HY-N1065

CAS No.: 84-99-1

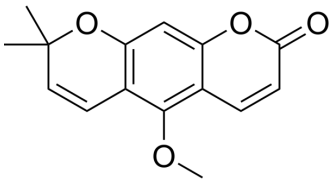
Molecular Formula: $C_{15}H_{14}O_4$

Molecular Weight: 258.27

Target: Apoptosis

Pathway: Apoptosis

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



BIOLOGICAL ACTIVITY

Description

Xanthoxyletin is a coumarin that can be isolated from Genus Zanthoxylum and Clausena. Xanthoxyletin has antioxidant and anti-inflammatory activities. Xanthoxyletin shows cytotoxic effects to cancer cells, and induces apoptosis and necrosis. Xanthoxyletin can be used for the research of cancer and inflammation[1][2].

In Vitro

Xanthoxyletin (1-500 μM; 30 min) inhibits DPPH radical with IC_{50} values of 247.1 μM and 63.8 μg/mL, and also shows a ferric reducing antioxidant power (FRAP) value of 45.2 μM[2].

Xanthoxyletin (10-500 μM; 24 h) shows cytotoxicity against HepG2, HCT116 and SK-LU-1 cancer cells with IC_{50} values of 78.2, 79.8 and 94.4 μM, respectively[2].

Xanthoxyletin (78 and 156 μM; 12 and 24 h) induces cell apoptosis and causes low necrosis[2].

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

Cell Cytotoxicity Assay[2]

Cell Line:	HepG2, HCT116, SK-LU-1 and Vero cell lines
Concentration:	10-500 μM
Incubation Time:	24 hours
Result:	Exhibited cytotoxicity to HepG2, HCT116 and SK-LU-1, but showed inactive effect to Vero cells.

Apoptosis Analysis[2]

Cell Line:	HepG2 cell line[2]
Concentration:	78 and 156 μM
Incubation Time:	12 and 24 hours
Result:	Induced apoptosis percentage of 49.6% and 64.2% at the dose of 78 and 156 μM, respectively. Showed a better apoptosis inducing effect that cisplatin.

REFERENCES

[1]. Sanna MD, et al. Histamine H4 receptor stimulation in the locus coeruleus attenuates neuropathic pain by promoting the coeruleospinal noradrenergic inhibitory pathway. Eur J Pharmacol. 2020 Feb 5;868:172859.

[2]. Jantamat P, et al. Cytotoxicity and Apoptosis Induction of Coumarins and Carbazole Alkaloids from Clausena harmandiana. Molecules. 2019 Sep 18;24(18):3385.

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