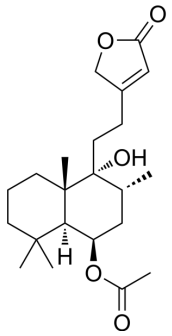
Vitexilactone

Cat. No.:	HY-N1079
CAS No.:	61263-49-8
Molecular Formula:	$C_{22}H_{34}O_5$
Molecular Weight:	378.5
Target:	Bacterial; Apoptosis
Pathway:	Anti-infection; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Vitexilactone is a diterpenoid that can be isolated from the leaves of Vitex negundo L. Vitexilactone shows antimicrobial activity towards E. coli. Vitexilactone induces cell apoptosis and inhibits cell cycle of cancer cells. Vitexilactone can be used for the research of cancer[1][2].

In Vitro

Vitexilactone shows significant antimicrobial activity towards E. coli with an MIC value ⊠90 μg/mL[1].
Vitexilactone (0-100 μg/mL; 17-24 h) inhibits cell proliferation of mammalian cancer cells[2].
Vitexilactone (25-100 μg/mL; 17 h) induces cell apoptosis at higher concentrations, while inhibits the cell cycle G0/G1 phase at lower concentrations of tsFT210 and K562 cells[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[2]

Cell Line:	tsFT210 and K562 cells lines
Concentration:	0-100 μg/mL
Incubation Time:	17-24 hours
Result:	Inhibited cell proliferation of mammalian cancer cells with IC_{50} values of 86.9 and 57.9 μg/mL for tsFT210 and K562 cells, respectively.

Apoptosis Analysis[2]

Cell Line:	tsFT210 and K562 cell lines
Concentration:	25-100 μg/mL
Incubation Time:	17 hours
Result:	Induced cell apoptosis of tsFT210 with a MIC value of 25 μg/mL.

Cell Cycle Analysis[2]

Cell Line:	tsFT210 and K562 cell lines
Concentration:	25-100 μg/mL

Incubation Time:	17 hours
Result:	Inhibited G0/G1 phase of cell cycle with the dose ranges of 50-6.25 μg/mL in tsFT210 cells.

REFERENCES

[1]. Sichaem J, et al. A new labdane-type diterpenoid from the leaves of Vitex negundo L. Nat Prod Res. 2021 Jul;35(14):2329-2334.

[2]. Li WX, et al. Labdane-type diterpenes as new cell cycle inhibitors and apoptosis inducers from Vitex trifolia L. J Asian Nat Prod Res. 2005 Apr;7(2):95-105.

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