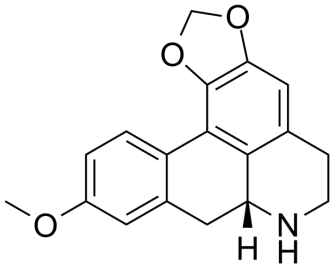
Xylopine

Cat. No.:	HY-N9534
CAS No.:	517-71-5
Molecular Formula:	$C_{18}H_{17}NO_3$
Molecular Weight:	295.33
Target:	Reactive Oxygen Species; Apoptosis
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Xylopine is an aporphine alkaloid with cytotoxic activity on cancer cells. Xylopine induces oxidative stress, causes G2/M cell cycle arrest and apoptosis in cancer cells[1].

In Vitro

Xylopine (3.5 μM-14 μM; 24-48 hours) displays potent cytotoxicity in a time- and does-depenpent manner[1].
Xylopine (72 h) has cytotoxic activity, with IC50 values ranging from 6.4 to 26.6 μM in eight different cancer cell lines (MCF7, HCT116, HepG2, SCC-9, HSC-3, HL-60, K-562, and B16-F10)[1].
Xylopine (3.5 μM-14 μM; 24-48 hours) causes cell cycle block at the phase G2/M, which is followed by internucleosomal DNA fragmentation[1].
Xylopine (3.5 μM-14 μM; 24-48 hours) significantly increases the early and late apoptosis, induces mitochondrial depolarization, and increases caspase-3 activation[1].
Xylopine also causes an increase in the production of reactive oxygen/nitrogen species (ROS/RNS), including hydrogen peroxide and nitric oxide, but not superoxide anion, and reduces glutathione levels are decreased in Xylopine-treated HCT116 cells[1].HCT116 cells[1]3.5 μM, 7 μM, and 14 μM 24 hours, 48 hoursInduced G2/M phase arrest.HCT116 cells[1]3.5 μM, 7 μM, and 14 μM 24 hours, 48 hoursSignificantly increased the early and late apoptosis.

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

Cell Viability Assay[1]

Cell Line:	HCT116 cells
Concentration:	3.5 μM, 7 μM, and 14 μM
Incubation Time:	24 hours, 48 hours
Result:	Displayed potent cytotoxicity in HCT116 cells.

Cell Cycle Analysis[1]

Cell Line:	HCT116 cells
Concentration:	3.5 μM, 7 μM, and 14 μM
Incubation Time:	24 hours, 48 hours
Result:	Induced G2/M phase arrest.

Apoptosis Analysis[1]

Cell Line:	HCT116 cells
Concentration:	3.5 μM, 7 μM, and 14 μM
Incubation Time:	24 hours, 48 hours
Result:	Significantly increased the early and late apoptosis.

REFERENCES

[1]. Luciano de Souza Santos, et al. Xylopine Induces Oxidative Stress and Causes G 2/M Phase Arrest, Triggering Caspase-Mediated Apoptosis by p53-Independent Pathway in HCT116 Cells. Oxid Med Cell Longev. 2017;2017:7126872.

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