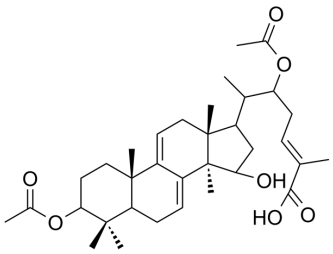
Ganoderic acid Mk

Cat. No.:	HY-N11643
CAS No.:	110024-14-1
Molecular Formula:	$C_{34}H_{50}O_7$
Molecular Weight:	570.76
Target:	Apoptosis; Reactive Oxygen Species; MMP; Caspase
Pathway:	Apoptosis; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Ganoderic acid Mk (GA-Mk) is a triterpenoid acid, that can be isolated from the mycelia of Ganoderma lucidum. Ganoderic acid Mk is efficiently anti-proliferative and can induce apoptosis of HeLa cells by mitochondria-mediated pathway. Ganoderic acid Mk can be used for cervical cancer research[1][2].

IC_{50} & Target	Caspase-3	Caspase-9

In Vitro

Ganoderic acid Mk (0-100 μM, 24 h) exhibits stronger cytotoxicity to human cancer cells than human normal cell lines[1].
Ganoderic acid Mk (0-40 μM, 12-48 h) has a dose-dependent inhibitory effect on proliferation of HeLa cells[1].
Ganoderic acid Mk (0-40 μM, 24 h) induces HeLa cells apoptosis[1].
Ganoderic acid Mk (0-40 μM, 24 h) induces ROS burst, MMP decrease and caspase-3, -9 activities increase[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[1]

Cell Line:	Human normal cell lines (MCF-10A and HF) and cancer cell lines (HO-8910PM, SW1990, 95-D and HeLa)
Concentration:	0-100 μM
Incubation Time:	24 h
Result:	Exhibited stronger cytotoxicity to human cancer cells (IC_{50} values were ranged within 29.8-44.2 μM) than human normal cell lines (IC_{50} values to MCF-10A and HF were 84.5 μM and 78.4 μM, respectively).

Cell Viability Assay[1]

Cell Line:	HeLa cells
Concentration:	0, 5, 10, 20, 40 μM
Incubation Time:	12, 24, 48 h
Result:	Showed cytotoxicity on HeLa cells in a dose- and time-dependent manner.

Apoptosis Analysis[1]

Cell Line:	HeLa cells
Concentration:	0, 10, 20, 40 μM
Incubation Time:	24 h
Result:	Increased the rate of early and late apoptotic cells in a dose-dependent manner in HeLa cells. GA-Mk could induce HeLa cells apoptosis in parallel with the accumulation of ROS, the loss of MMP and the activation of activities of caspases.

REFERENCES

[1]. Liu R M, et al. Anti-proliferation and induced mitochondria-mediated apoptosis of ganoderic acid Mk from Ganoderma lucidum mycelia in cervical cancer HeLa cells[J]. Latin American Journal of Pharmacy, 2012, 31(1):43-50.

[2]. Ding N, et al. Separation and determination of four ganoderic acids from dried fermentation mycelia powder of Ganoderma lucidum by capillary zone electrophoresis. J Pharm Biomed Anal. 2010 Dec 15;53(5):1224-30.

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