Ganoderic acid DM

Cat. No.: HY-120140

CAS No.: 173075-45-1

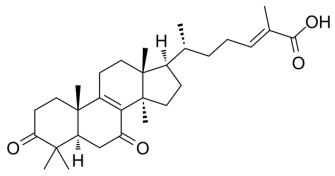
Molecular Formula: $C_{30}H_{44}O_4$

Molecular Weight: 468.67

Target: Apoptosis; PI3K

Pathway: Apoptosis; PI3K/Akt/mTOR

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (106.68 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1337 mL	10.6685 mL	21.3370 mL
	5 mM	0.4267 mL	2.1337 mL	4.2674 mL
	10 mM	0.2134 mL	1.0668 mL	2.1337 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 1.25 mg/mL (2.67 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.25 mg/mL (2.67 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (2.67 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ganoderic acid DM, a natural triterpenoid isolated from Ganoderma lucidum, induces DNA damage, G1 cell cycle arrest and apoptosis in human breast cancer cells. Ganoderic acid DM as a specific inhibitor of osteoclastogenesis[1][2].

In Vitro

Ganoderic acid DM (GADM) effectively inhibits cell proliferation and colony formation in MCF-7 human breast cancer cells, which was much stronger than that of MDA-MB-231 breast cancer cells[1].
Ganoderic acid DM especially suppresses the expression of c-Fos and nuclear factor of activated T cells c1 (NFATc1).
Ganoderic acid DM markedly suppressed the expression of cathepsin K and TRAP mRNA[2].
Ganoderic acid DM induces autophagic apoptosis in non-small cell lung cancer cells by inhibiting the PI3K/Akt/mTOR activity [3].

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

Cell Viability Assay[1]

Cell Line:	MCF-7 and MDA-MB-231 cells.
Concentration:	0-100 μM.
Incubation Time:	48 h.
Result:	Decreased the cell viability in breast cancer cells.

Cell Viability Assay[2]

Cell Line:	RAW-D cells.
Concentration:	0-100 μg/mL.
Incubation Time:	0-100 μg/mL.
Result:	Clearly suppressed osteoclastogenesis from the RAW 264 cell D-clone.

REFERENCES

[1]. Guo-Sheng Wu, et al. Ganoderic acid DM, a natural triterpenoid, induces DNA damage, G1 cell cycle arrest and apoptosis in human breast cancer cells. Fitoterapia. 2012 Mar;83(2):408-14.

[2]. Ichiko Miyamoto, et al. Regulation of osteoclastogenesis by ganoderic acid DM isolated from Ganoderma lucidum. Eur J Pharmacol. 2009 Jan 5;602(1):1-7.

[3]. Junbo Xia, et al. Ganoderic acid DM induces autophagic apoptosis in non-small cell lung cancer cells by inhibiting the PI3K/Akt/mTOR activity. Chem Biol Interact. 2020 Jan 25;316:108932.

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