Ziyuglycoside II

Cat. No.: HY-N0332

CAS No.: 35286-59-0

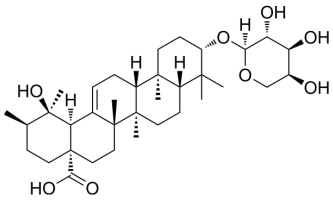
Molecular Formula: $C_{35}H_{56}O_8$

Molecular Weight: 604.81

Target: Reactive Oxygen Species; Apoptosis

Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Apoptosis

Storage: -20°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 (82.67 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6534 mL	8.2671 mL	16.5341 mL
	5 mM	0.3307 mL	1.6534 mL	3.3068 mL
	10 mM	0.1653 mL	0.8267 mL	1.6534 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: 0.83 mg/mL (1.37 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 0.83 mg/mL (1.37 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.83 mg/mL (1.37 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ziyuglycoside II is a triterpenoid saponin compound extracted from Sanguisorba officinalis L.. Ziyuglycoside II induces reactive oxygen species (ROS) production and apoptosis. Anti-inflammation and anti-cancer effect[1].

In Vitro

Ziyuglycoside II (10-60 μM; 24 h and 48 h) inhibits MDA-MB-435 cells growth in a dose-dependent manner. The IC_{50} of Ziyuglycoside II at 24 h and 48 h is 5.92 μM and 4.74 μM, respectively[1].
Ziyuglycoside II (5-25 μM) induces G0/G1 and S phase arrest in MDA-MB-435 cells at 24 h[1].
Ziyuglycoside II (5-25 μM; 24 hours) significantly increases apoptotic rate of MDA-MB-435 cells[1].
Ziyuglycoside II (5-25 μM; 24 hours) increases expressions of both p53 and p21 in MDA-MB-435 cells, which effect is dose-dependent[1].

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

Cell Viability Assay[1]

Cell Line:	MDA-MB-435 cells
Concentration:	10, 20, 30, 40, 50, 60 μM
Incubation Time:	24 hours and 48 hours
Result:	The IC_{50} at 24 h and 48 h was 5.92 μM and 4.74 μM, respectively.

Cell Cycle Analysis[1]

Cell Line:	MDA-MB-435 cells
Concentration:	5, 10, 25 μM
Incubation Time:	24 hours
Result:	Induced G0/G1 and S phase arrest.

Apoptosis Analysis[1]

Cell Line:	MDA-MB-435 cells
Concentration:	5, 10, 25 μM
Incubation Time:	24 hours
Result:	The apoptotic rate was significantly increased in comparison to that of the control.

Western Blot Analysis[1]

Cell Line:	MDA-MB-435 cells
Concentration:	5, 10, 25 μM
Incubation Time:	24 hours
Result:	Treatment resulted in increased expressions of both p53 and p21.

CUSTOMER VALIDATION

- Front Pharmacol. 2020 Sep 18;11:576547.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Zhu X, et al. Ziyuglycoside II inhibits the growth of human breast carcinoma MDA-MB-435 cells via cell cycle arrest and induction of apoptosis through the mitochondria dependent pathway. Int J Mol Sci. 2013 Sep 3;14(9):18041-55.

[2]. Zhu X, et al. Ziyuglycoside II induces cell cycle arrest and apoptosis through activation of ROS/JNK pathway in human breast cancer cells. Toxicol Lett. 2014 May 16;227(1):65-73.

Caution: Product has not been fully validated for medical applications. For research use only.

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