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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
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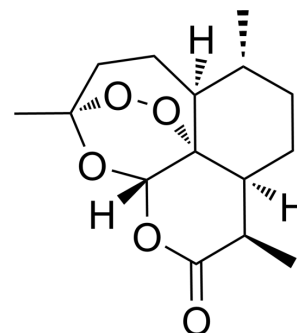
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Artemisinin

Cat. No.:	HY-B0094
CAS No.:	63968-64-9
Molecular Formula:	C ₁₅ H ₂₂ O ₅
Molecular Weight:	282.33
Target:	HCV; Parasite; Akt; Ferroptosis
Pathway:	Anti-infection; PI3K/Akt/mTOR; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 1 year -20°C 6 months



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (177.10 mM; Need ultrasonic)
H₂O : < 0.1 mg/mL (ultrasonic) (insoluble)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		3.5420 mL	17.7098 mL	35.4195 mL
	5 mM		0.7084 mL	3.5420 mL	7.0839 mL
	10 mM		0.3542 mL	1.7710 mL	3.5420 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (7.37 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (7.37 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (7.37 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Artemisinin (Qinghaosu), a sesquiterpene lactone, is an anti-malarial agent isolated from the aerial parts of *Artemisia annua* L. plants^[1]. Artemisinin inhibits AKT signaling pathway by decreasing pAKT in a dose-dependent manner. Artemisinin reduces cancer cell proliferation, migration, invasion, tumorigenesis and metastasis and has neuroprotective effects^[2].

IC₅₀ & Target

Plasmodium

In Vitro

Artemisinin (Qinghaosu) (25 or 50 μ M; 24 hours) concentration-dependently suppresses A β 25-35 induced cytotoxicity in PC12 cells^[1].

Artemisinin (1-100 μ M; 24 hours) selectively inhibits cancer cell growth in a dose-dependent manner with IC₅₀ values of 31.30 $\pm$ 0.73 μ M in UMRC-2 cells and 23.97 $\pm$ 0.92 CAKI-2 cells^[2].

Artemisinin (25, 50 μ M; 24 hours) suppresses the phosphorylation of AKT in UMRC-2 and CAKI-2 cells in a dose-dependent manner^[2].

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

Cell Cytotoxicity Assay^[1]

Cell Line:	PC12 cells
Concentration:	25 or 50 μ M
Incubation Time:	24 hours
Result:	Protected and rescue PC12 cells against A β 25-35-induced cell death.

Cell Viability Assay^[2]

Cell Line:	RCC cells, RCC cell lines UMRC-2 and CAKI-2, and normal renal cell HK-2
Concentration:	1, 5, 10, 50, and 100 μ M
Incubation Time:	24 hours
Result:	Selectively inhibited cancer cell growth in a dose-dependent manner.

Western Blot Analysis^[2]

Cell Line:	UMRC-2 and CAKI-2 cells
Concentration:	25, 50 μ M
Incubation Time:	24 hours
Result:	Decreased pAKT in a dose-dependent manner.

In Vivo

Artemisinin (gavage; 20 mg/kg/day; for two weeks) suppresses UMRC-2 xenograft tumor growth^[2].

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

Animal Model:	4-6 weeks old male nude mice ^[2]
Dosage:	20 mg/kg
Administration:	gavage; every day for two weeks
Result:	Suppressed UMRC-2 xenograft tumor growth.

CUSTOMER VALIDATION

- Cell Mol Immunol. 2023 Jan;20(1):51-64.
- J Adv Res. 2023 Sep 25;S2090-1232(23)00289-8.
- Cancer Lett. 2024 Feb 13:216732.

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- Cell Death Dis. 2021 Mar 15;12(3):276.
 - Cell Mol Biol Lett. 2022 Jul 28;27(1):62.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Zeng Z, et al. Artemisinin protects PC12 cells against β -amyloid-induced apoptosis through activation of the ERK1/2 signaling pathway. Redox Biol. 2017 Apr 4;12:625-633.

[2]. Lin SP, et al. Artemisinin Prevents Glutamate-Induced Neuronal Cell Death Via Akt Pathway Activation. Front Cell Neurosci. 2018 Apr 20;12:108.

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

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