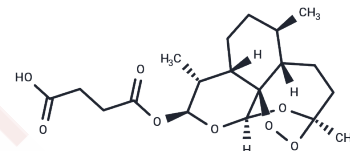


Artesunate

Chemical Properties

CAS No. :	88495-63-0
Formula:	C ₁₉ H ₂₈ O ₈
Molecular Weight:	384.42
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Artesunate (WR-256283) is a semisynthetic derivative of artemisinin and an inhibitor of STAT-3/EXP1. Water-soluble yet relatively unstable in neutral or acidic aqueous solutions, Artesunate is primarily employed for the treatment of malaria.
Targets(IC50)	Ferroptosis,STAT,Parasite,Virus Protease
In vitro	<p>Methods: SKM-1 cells were treated with 0-50 µg/mL Artesunate for 48 h. Methylation-specific PCR was used to detect CDH1 methylation status, while Western blot and laser confocal microscopy were employed to detect E-cadherin expression and localization.</p> <p>Results: Artesunate treatment induced CDH1 demethylation, restored E-cadherin expression, and promoted its aggregation to the cell membrane.[1]</p> <p>Methods: Human glioma SHG44 cells were treated with 0-50 mg/L Artesunate for 24-48 h. Cell proliferation was detected by MTT assay, apoptosis by flow cytometry, migration and invasion by Transwell assay, biomechanical properties by atomic force microscopy, and claudin-1 expression by RT-PCR and Western blot.</p> <p>Results: Treatment with 30 mg/L Artesunate for 48 h significantly inhibited cell proliferation, migration, and invasion, induced apoptosis rate to 23.7%, while increasing cell adhesion force and membrane roughness, decreasing elasticity, and upregulating claudin-1 expression.[2]</p>
In vivo	<p>Methods: HeLa cell xenograft nude mice were randomly divided into groups. The Artesunate group received daily intraperitoneal injection of 100 mg/kg (diluted in sterile PBS) for 7 consecutive days, while the irradiation group received 10 Gy irradiation on day 7.</p> <p>Results: Combined treatment reduced tumor volume by 72.34%, significantly higher than 41.22% with irradiation alone, confirming the in vivo radiosensitizing effect of ART. [3]</p>
Cell Research	Growth inhibition assay: The SKM-1 cells (1×10 ⁵ /mL) are firstly seeded in 96-well plates. Artesunate is diluted in 0.1% dimethyl sulfoxide (DMSO) producing 0, 12.5, 25, 50µg/mL concentrations and added to the SKM-1 cells with 100 µl per well. A negative control is treated with 0.1% DMSO. At 0, 24, 48, and 72 hours, same amount of MTT solution is added into each well and cultured for extra 4 hours. MTT treated cells are fixed with 150 µL DMSO for 30 min at room temperature and then determined with Evolution 201 and 220 UV-Vis spectrophotometer system at 540 nm. (Only for Reference)

Solubility Information

Solubility	Ethanol: 9 mg/mL (23.41 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 250 mg/mL (650.33 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (13.01 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6013 mL	13.0066 mL	26.0132 mL
5 mM	0.5203 mL	2.6013 mL	5.2026 mL
10 mM	0.2601 mL	1.3007 mL	2.6013 mL
50 mM	0.052 mL	0.2601 mL	0.5203 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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