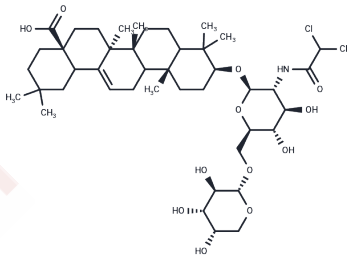
Data Sheet (Cat.No.T13538)

TargetMol

AlbA-DCA

Chemical Properties



CAS No. :

Formula: C43H67Cl2NO12

Molecular Weight: 860.9

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	AlbA-DCA, a conjugate of Albiziabioside A and a dichloroacetate acid subunit, markedly increases intracellular ROS, alleviates lactic acid accumulation in the tumor microenvironment, selectively kills cancer cells, and induces apoptosis.
Targets(IC50)	Apoptosis,Reactive Oxygen Species,ROS
In vitro	AlbA-DCA exhibits cytotoxicity against MCF-7, HCT116, A375, 4T1, HBMEC, and LO2 cells (IC50s: 0.43 μM, 3.87 μM, 3.78 μM, 1.31 μM, 38.20 μM, and 53.14 μM, respectively). Treatment with AlbA-DCA (2 μM; 24 hours) induces apoptosis in MCF-7 cells, significantly up-regulating cytochrome c expression, down-regulating Bcl-2 expression, and enhancing caspase-9 expression.
In vivo	AlbA-DCA (2 mg/kg; subcutaneous injection; every 2 days; for 2 weeks; nude mice) demonstrates significant antitumor efficacy, nearly completely inhibiting tumor progression with no observed mortality or significant changes in body weight. Additionally, AlbA-DCA exhibits no apparent toxicity in the liver and kidney, nor any major abnormalities in the heart, liver, spleen, lung, and kidney.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.1616 mL	5.8079 mL	11.6158 mL
5 mM	0.2323 mL	1.1616 mL	2.3232 mL
10 mM	0.1162 mL	0.5808 mL	1.1616 mL
50 mM	0.0232 mL	0.1162 mL	0.2323 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

Wei G, et al. Natural Product Albiziabioside A Conjugated with Pyruvate Dehydrogenase Kinase Inhibitor Dichloroacetate To Induce Apoptosis-Ferroptosis-M2-TAMs Polarization for Combined Cancer Therapy. J Med Chem. 2019 Oct 10;62(19):8760-8772.