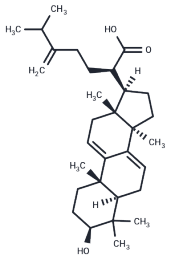
Data Sheet (Cat.No.TN1086)

TargetMol

Dehydrotrametenolic acid

Chemical Properties



CAS No. : 6879-05-6

Formula: C31H48O3

Molecular Weight: 468.71

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	Dehydrotrametenolic acid (Dehydroeburicoic acid) induces necrotic cell death that involves Ca(2+) overload, mitochondrial dysfunction, and calpain activation in human glioblastomas.
Targets(IC50)	Apoptosis,NOS,Caspase,NO Synthase,TNF
In vitro	3-(4,5-Dimethyl-thiazol-2-yl)-2,5-diphenyltetrazolium bromide and lactate dehydrogenase release assays indicated that Dehydroeburicoic acid inhibited the proliferation of the human glioblastoma cell U87MG. In addition, Annexin V and propidium iodide staining showed that Dehydroeburicoic acid treatment led to a rapid increase of glioblastomas in the necrotic/late apoptotic fraction, whereas cell cycle analysis revealed that Dehydroeburicoic acid failed to significantly enhance the population of U87MG cells in the hypodiploid (sub-G1) fraction. Using electron microscopy, we found that Dehydroeburicoic acid induced significant cell enlargements, massive cytoplasmic vacuolization, and loss of mitochondrial membrane integrity. Dehydroeburicoic acid treatment triggered an intracellular Ca(2+) increase, and Dehydroeburicoic acid-induced cell death was significantly attenuated by BAPTA-AM but not ethylenediaminetetraacetic acid or ethylene glycol tetraacetic acid. Dehydroeburicoic acid instigated a reduction of both mitochondrial transmembrane potential and intracellular ATP level. Moreover, Dehydroeburicoic acid induced proteolysis of alpha-spectrin by calpain, and Dehydroeburicoic acid cytotoxicity in U87MG cells was caspase-independent but was effectively blocked by calpain inhibitor. Interestingly, Dehydroeburicoic acid also caused autophagic response that was prevented by calpain inhibitor.

Solubility Information

Solubility	DMSO: 10 mM,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1335 mL	10.6676 mL	21.3352 mL
5 mM	0.4267 mL	2.1335 mL	4.267 mL
10 mM	0.2134 mL	1.0668 mL	2.1335 mL
50 mM	0.0427 mL	0.2134 mL	0.4267 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

Dehydroeburicoic acid induces calcium- and calpain-dependent necrosis in human U87MG glioblastomas.Chem Res Toxicol. 2009 Nov;22(11):1817-26.