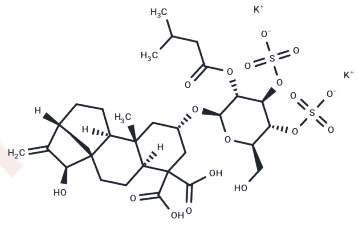
Data Sheet (Cat.No.T8204)

TargetMol

Gummiferin dipotassium

Chemical Properties



CAS No. : 33286-30-5

Formula: C31H44K2O18S2

Molecular Weight: 847.00

Storage: Keep away from moisture,Keep away from direct sunlight
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	Gummiferin dipotassium exhibits antifungal activity against Saccharomyces cerevisiae and can be used in biochemical experiments and drug synthesis research.
Targets(IC50)	Antifungal
In vitro	Gummiferin dipotassium (10-25 μM, 48 hours) can induce death in mouse primary pulmonary endothelial cells and exacerbate mitochondrial dysfunction, specifically manifested as mitochondrial membrane potential depolarization, increased reactive oxygen species generation, and opening of the mitochondrial permeability transition pore [2]. Gummiferin dipotassium (2 μM) can induce Ca^{2+} release in aged rat liver mitochondria, while triggering mitochondrial swelling and membrane potential collapse [3].
In vivo	Gummiferin dipotassium (13.5 mg/kg, intraperitoneal injection) can induce behavioral manifestations such as drowsiness, fatigue, and epileptic seizure in rats, and cause histopathological damage to the liver and kidneys, specifically manifested as hepatic cell vacuolar degeneration, necrosis, and renal tubular necrosis [5].

Solubility Information

Solubility	DMSO: 20.00 mg/mL (23.61 mM),Sonication is recommended. H2O: 80.00 mg/mL (94.45 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.1806 mL	5.9032 mL	11.8064 mL
5 mM	0.2361 mL	1.1806 mL	2.3613 mL
10 mM	0.1181 mL	0.5903 mL	1.1806 mL
50 mM	0.0236 mL	0.1181 mL	0.2361 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

Ri M, et al. Identification of Toyocamycin, an agent cytotoxic for multiple myeloma cells, as a potent inhibitor of ER stress-induced XBP1 mRNA splicing. Blood Cancer J. 2012 Jul;2(7):e79.
Belosludtseva NV, et al. ANT-Mediated Inhibition of the Permeability Transition Pore Alleviates Palmitate-Induced Mitochondrial Dysfunction and Lipotoxicity. Biomolecules. 2024 Sep 15;14(9):1159.
García N, et al. Cyclosporin A is unable to inhibit carboxyatractyloside-induced permeability transition in aged mitochondria. Comp Biochem Physiol C Toxicol Pharmacol. 2009 Apr;149(3):374-81.
Luciani S, et al. Effects of carboxyatractyloside a structural analogue of atractyloside on mitochondrial oxidative phosphorylation. Life Sci II. 1971 Sep 8;10(17):961-8.
Hatch RC, et al. Toxicologic study of carboxyatractyloside (active principle in cocklebur--Xanthium strumarium) in rats treated with enzyme inducers and inhibitors and glutathione precursor and depletor. Am J Vet Res. 1982 Jan;43(1):111-6.
Pebay-Peyroula E, et al. Structure of mitochondrial ADP/ATP carrier in complex with carboxyatractyloside. Nature. 2003 Nov 6;426(6962):39-44.