

Digitonin [11024-24-1]

#Cat: NB-64-16346-1mL

Size: 1 mL

#Cat: NB-64-16346-25mg

Size: 25 mg

Chemical Properties:

CAS No: 11024-24-1

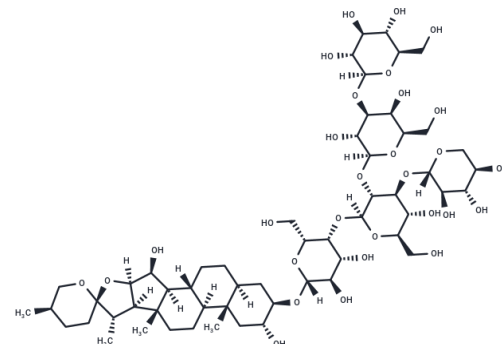
Formula: C₅₆H₉₂O₂₉

Molecular Weight 1229.31

Appearance: Solid

Storage: keep away from moisture

Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description:

Description	Digitonin is a natural product of the glycoside family and is a detergent. Digitonin has antitumor activity, binds to cholesterol molecules to increase the permeability of cell membranes, and is active in the cleavage of cell membranes in a wide range of cells.
Targets (IC50)	Others
In vitro	<p>METHODS: Rat adrenal pheochromocytoma cells PC-12 were treated with Digitonin (10 μ g/mL) for 10 min to increase cell permeability.</p> <p>RESULTS: After permeabilization with Digitonin, PC12 cells could be stimulated to release norepinephrine by micromolar concentrations of free Ca²⁺. [1]</p> <p>METHODS: Human glioblastoma cells U87 were treated with Digitonin (1-5 μ g/mL) for 20 min, and cell viability was measured by MTT after overnight cell incubation.</p> <p>RESULTS: 1 μ g/mL Digitonin treatment resulted in a slight increase in cell viability, 3 μ g/mL Digitonin reduced the growth-promoting effect, and the cell viability was similar to that of the control, and 5 μ g/mL Digitonin inhibited the cell viability, which indicated a significant toxicity to the cells. [2]</p> <p>METHODS: Immortalized human T-lymphocytes Jurkat were treated with Digitonin (1-4 μ g/mL) for 20 min and cell viability was measured by Resazurin assay.</p> <p>RESULTS: Digitonin treatment resulted in a significant decrease in metabolic activity and this inhibition was concentration-dependent. [2]</p>
In vivo	<p>METHODS: To determine whether Digitonin enhances the efficacy of CBDCA in vivo, Digitonin (0.2 mL 400 μ M) was hepatic arterially infused into LH rats bearing hepatocellular carcinoma tumors, followed by injection of CBDCA 10 min later.</p> <p>RESULTS: Digitonin pretreatment increased the tumor uptake of CBDCA and enhanced the cytotoxic effect of CBDCA. [3]</p>

Solubility Information

Solubility	<p>H₂O: 99.57 mg/mL (81 mM), Sonication is recommended.</p> <p>DMSO: 242.5 mg/mL (197.27 mM), Sonication is recommended.</p> <p>(< 1 mg/ml refers to the product slightly soluble or insoluble)</p>
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.8135 mL	4.0673 mL	8.1346 mL
5 mM	0.1627 mL	0.8135 mL	1.6269 mL
10 mM	0.0813 mL	0.4067 mL	0.8135 mL
50 mM	0.0163 mL	0.0813 mL	0.1627 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.

Reference

- Schäfer T, et al. Digitonin-permeabilized cells are exocytosis competent. *J Neurochem.* 1987 Dec;49(6):1697-707.
- Chen Y, Wang X, Shi H, et al. Montelukast Inhibits HCoV-OC43 Infection as a Viral Inactivator. *Viruses.* 2022, 14(5): 861
- Wang S, et al. Digitonin-facilitated delivery of imaging probes enables single-cell analysis of AKT signalling activities in suspension cells. *Analyst.* 2021 Sep 7;146(17):5307-5315.
- He Z, Zhang Z, Xu P, et al. Laminarin Reduces Cholesterol Uptake and NPC1L1 Protein Expression in High-Fat Diet (HFD)-Fed Mice. *Marine Drugs.* 2023, 21(12): 624.
- Wang Z, Cui L, Lin Y, et al. Cancer cell-intrinsic biosynthesis of itaconate promotes tumor immunogenicity. *The EMBO Journal.* 2024: 1-18.
- Lindnér PG, et al. Digitonin enhances the efficacy of carboplatin in liver tumour after intra-arterial administration. *Cancer Chemother Pharmacol.* 1997;40(5):444-8.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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