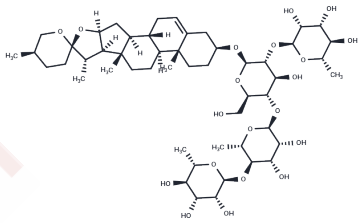
Data Sheet (Cat.No.T3519)

TargetMol

Formosanin C

Chemical Properties



CAS No. : 50773-42-7

Formula: C51H82O20

Molecular Weight: 1015.18

Storage: Keep away from direct sunlight,Keep away from moisture,Store under nitrogen
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	Formosanin C (Polyphyllin B) is a compound isolated from Rhizoma Paridis, showed pro-apoptosis and immunoregulation with antitumor activity in cultured cells and animal systems.
Targets(IC50)	Apoptosis,Ferroptosis,NF-κB,Caspase,Autophagy,Antifungal
In vitro	Attenuation of formosanin C-induced change of Deltapsi(m) by caspase-2 inhibitor (Z-VDVAC) implies that caspase-2 acts upstream of the mitochondria. Blockage of formosanin C-induced apoptotic process by using either permeability transition pore inhibitor (cyclosporine A) or caspase-9 inhibitor (Z-LEHD) demonstrates the necessity of mitochondria and caspase-9 in formosanin C-induced apoptosis of HT-29 cells.
Kinase Assay	The enzyme activity and kinetics of the purified ROCK1(3-543) are determined using scintillation proximity assay. In this assay, purified ROCK1 is incubated with peptide substrate (Biotin-Ahx-AKRRLSSLRA-CONH2), and 33ATP and the subsequent incorporation of 33P into the peptide is quantified by streptavidin bead capture. For IC50 determination, test compounds are dissolved at 10 mM in 100% DMSO, with subsequent serial dilution in 100% DMSO. Compounds are typically assayed over an 11-point dilution range with a concentration in the assay of 10 μM to 0.2 nM in 3-fold dilutions. For dose-response curves, data are normalized and expressed as percentage inhibition using the formula 100×[(U-C1)/(C2-C1)], where U is the unknown value, C1 is the average of the high signal (0%) control wells, and C2 is the average of the low signal (100%) control wells. Curve fitting is performed The results for each compound are recorded as pIC50 values[1].

Solubility Information

Solubility	DMSO: 250 mg/mL (246.26 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.985 mL	4.9252 mL	9.8505 mL
5 mM	0.197 mL	0.985 mL	1.9701 mL
10 mM	0.0985 mL	0.4925 mL	0.985 mL
50 mM	0.0197 mL	0.0985 mL	0.197 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

Lee JC., et al. Formosanin C-induced apoptosis requires activation of caspase-2 and change of mitochondrial membrane potential. Cancer Sci. 2009 Mar;100(3):503-13.

Chen P, Wu S, Dong X, et al. Formosanin C induces autophagy-mediated apoptosis in multiple myeloma cells through the PI3K/AKT/mTOR signaling pathway. Hematology. 2022, 27(1): 977-986