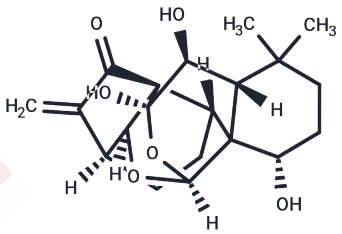
Data Sheet (Cat.No.T2S1975)

TargetMol

Ponicidin

Chemical Properties



CAS No. : 52617-37-5

Formula: C20H26O6

Molecular Weight: 362.42

Storage: Store at low temperature,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	Ponicidin (Rubescensine B) is a diterpenoid derived from Rabdosia rubescens that exhibits immunoregulatory, anti-inflammatory, anti-viral, and anti-cancer activity. Ponicidin induces apoptosis of gastric carcinoma cells, decreases the phosphorylation of JAK2 and STAT3, and shows no effect on the protein levels of JAK2 and STAT3.
Targets(IC50)	Apoptosis,STAT,JAK
In vitro	K562 cells in culture medium in vitro were given different concentrations of Ponicidin (10-50 micromol x L(-1)) for 24, 48, and 72 h. The inhibitory rate of the cells was measured by MTT assay, cell apoptotic rates were detected by flow cytometry (FCM) using Annexin V staining after K562 cells were treated with different concentrations of Ponicidin for 72 hours, and cell morphology was observed by Wright-Giemsa staining. Ponicidin (over 30 micromol x L(-1)) could inhibit the growth of K562 cells in both time- and dose-dependent manner. FCM analysis revealed that apoptotic cells were gradually increased in a dose-dependent manner after treatment for 72 hours, and that marked morphological changes of cell apoptosis such as condensation of chromatin was clearly observed by Wright-Giemsa staining after treatment by 50 micromol x L(-1) Ponicidin. Furthermore, Western blotting also showed that expression of p-AKT and p-P85 in PI3K/AKT signaling pathways was downregulated dramatically whereas the expression of p-P38, as well as p-ERK and p-JNK, remained unchanged after the cells were treated by PON for 48 h.

Solubility Information

Solubility	DMSO: 242.5 mg/mL (669.11 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (13.8 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7592 mL	13.7961 mL	27.5923 mL
5 mM	0.5518 mL	2.7592 mL	5.5185 mL
10 mM	0.2759 mL	1.3796 mL	2.7592 mL
50 mM	0.0552 mL	0.2759 mL	0.5518 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

Xiaodan Liu, et al. Apoptosis inducing effect of ponicidin in leukemia K562 cells and its mechanisms of action. Zhongguo Zhong Yao Za Zhi. 2010 Aug;35(16):2161-5.
Ponicidin inhibits monocytic leukemia cell growth by induction of apoptosis. Int J Mol Sci. 2008 Nov;9(11):2265-77.