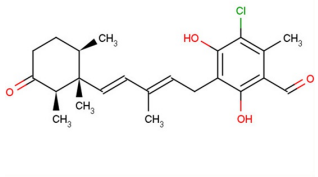
Data Sheet (Cat.No.T14330)

TargetMol
A DRUG SCREENING EXPERT

Ascochlorin

Chemical Properties



CAS No.:	26166-39-2
Formula:	C23H29ClO4
Molecular Weight:	404.93
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Ascochlorin (Ilicicolin D), an isoprenoid antibiotic, mediates its anti-tumor effects predominantly through the suppression of STAT3 signaling cascade. Ascochlorin induces apoptosis and it has Anti-inflammatory activity[1] [2][3].
Targets(IC_{50})	STAT3: None Apoptosis: None
In vitro	Ascochlorin inhibits the mRNA expression and the protein secretion of interleukin (IL)-1β and IL-6 but not tumor necrosis factor (TNF)-α in LPS-stimulated RAW 264.7 macrophage cells. Ascochlorin (Ilicicolin D) (10-50 μM; 24-72 hours) inhibits the viability of HepG2, HCCLM3 and Huh7 cells in a time and dose dependent manner[3]. Ascochlorin (1-50 μM) significantly suppresses the production of nitric oxide (NO) and prostaglandin E2 (PGE2) and decreases the gene expression of inducible NO synthase (iNOS) and cyclooxygenase-2 (COX-2) in a dose-dependent manner. Ascochlorin (50 μM; 48 hours) induces apoptosis in HCC cells[3]. Ascochlorin suppresses nuclear translocation and DNA binding affinity of nuclear factor-κB (NF-κB). Ascochlorin down-regulates phospho-extracellular signal-regulated kinase 1/2 (p-ERK1/2) and p-p38[2].
In vivo	Ascochlorin (Ilicicolin D) (2.5-5 mg/kg; i.p.; day 0, 1, 2, 3, 13, 15, 17, 20, 22, 24, 27, 29 and 31) inhibits tumor growth in an orthotopic HCC mouse model[1].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.47 mL	12.348 mL	24.696 mL
5 mM	0.494 mL	2.47 mL	4.939 mL
10 mM	0.247 mL	1.235 mL	2.47 mL
50 mM	0.049 mL	0.247 mL	0.494 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Min-Wen JC, et al. Molecular Targets of Ascochlorin and Its Derivatives for Cancer Therapy. Adv Protein Chem Struct Biol. 2017;108:199-225.

2. Lee SH, et al. Anti-Inflammatory Effect of Ascochlorin in LPS-Stimulated RAW 264.7 Macrophage Cells Is Accompanied With the Down-Regulation of iNOS, COX-2 and Proinflammatory Cytokines Through NF-κB, ERK1/2, and p38 Signaling Pathway. J Cell Biochem. 2016 Apr;117(4):978-87.

3. Dai X, et al. Ascochlorin, an isoprenoid antibiotic inhibits growth and invasion of hepatocellular carcinoma by targeting STAT3 signaling cascade through the induction of PIAS3. Mol Oncol. 2015 Apr;9(4):818-33.

Tel:781-999-4286 E-mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481