

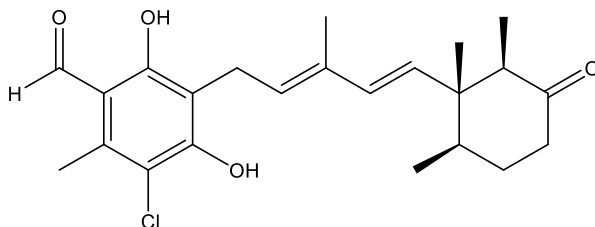
**Catalog #10-5296**

**Ascochlorin**

CAS# 26166-39-2

3-Chloro-4,6-dihydroxy-2-methyl-5-[(2E,4E)-3-methyl-5-[(1R,2R,6R)-1,2,6-trimethyl-3-oxocyclohexyl]-2,4-pentadien-1-yl]-benzaldehyde; Illicolin D; NSC 287492

Lot # E108427



Ascochlorin is a novel isoprenoid phenol isolated from *Acremonium egyptiacum* and other species.<sup>1</sup> It is a novel, specific inhibitor of the mitochondrial cytochrome bc<sub>1</sub> complex (mitochondrial respiratory chain complex III) acting at both active sites.<sup>2</sup> It induces caspase-independent necroptosis in LPS-stimulated RAW 264.7 macrophages<sup>3</sup> resulting in anti-inflammatory effects<sup>4</sup>. Demonstrates substantial antineoplastic effects in a variety of tumor cell lines and mouse models.<sup>5</sup>

- 1) Tamura *et al.* (1968), *Ascochlorin, a new antibiotic, found by the paper-disc agar diffusion method. I. Isolation, biological and chemical properties of ascochlorin. (Studies on antiviral and antitumor antibiotics.I)*; J. Antibiot. (Tokyo) **21** 539
- 2) Berry *et al.* (2010), *Ascochlorin is a novel, specific inhibitor of the mitochondrial cytochrome bc<sub>1</sub> complex*; Biochim. Biophys. Acta **1797** 360
- 3) Park *et al.* (2019), *Ascochlorin induces caspase-independent necroptosis in LPS-stimulated RAW 264.7 macrophages*; J. Ethnopharmacol. **239** 111898
- 4) Lee *et al.* (2016), *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. **108** 199
- 5) Min-Wen *et al.* (2017), *Molecular Targets of Ascochlorin and Its Derivatives for Cancer Therapy*; Adv. Protein Chem. Struct. Biol. **108** 199

**PHYSICAL DATA**

Molecular Weight:	404.93
Molecular Formula:	C <sub>23</sub> H <sub>29</sub> O <sub>4</sub>
Purity:	>98% (HPLC)
	NMR: (Conforms)
Solubility:	DMSO (10 mg/mL)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

**Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.**

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