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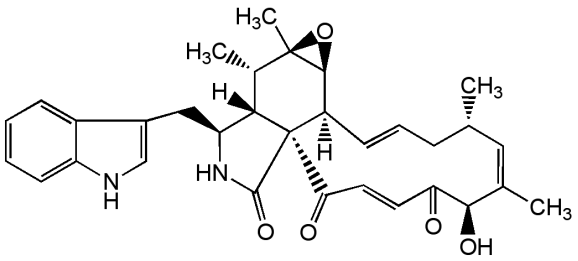
Product Information

Chaetoglobosin A
from *Chaetomium globosum*

Catalog Number **SML0642**
Storage Temperature –20 °C

CAS RN 50335-03-0



Product Description
Molecular formula: $C_{32}H_{36}N_2O_5$
Molecular weight: 528.64

Chaetomium globosum is a fungus commonly found in water-damaged walls and causes Sick Building Syndrome (SBS).[1] Chaetoglobosin A is a mycotoxic cytochalasin. Over 40 chaetoglobosins were characterized, many of which show acute toxicity to mammals, as well as cytotoxicity to human cancer cell lines such as KB, K562, MCF-7, and HepG2.[2,3]

Cytochalasins were also found to inhibit glucose transport in human erythrocytes by binding to the glucose carrier on the erythrocyte membrane.[4] Chaetoglobosin A was found to inhibit nematode proliferation and egg hatching. It also causes mortality of second stage juveniles of *Meloidogyne incognita*.[5]

Purity: ≥98% (HPLC)

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
Chaetoglobosin A is soluble in DMSO (10 mg/mL) and methanol (10 mg/mL).

Storage/Stability
Store the product sealed at –20 °C. Under these conditions the product is stable for at least 2 years.

References
1. Brightman, H.S., and Moss, N., Sick building syndrome studies and the compilation of normative and comparative values. in: Indoor air quality handbook. eds., Spengler, J.D. et al., McGraw-Hill, (New York, NY: 2000), p. 3.1–3.32.
2. Nielsen, K.F. et al., Production of mycotoxins on artificially and naturally infested building materials. Mycopathologia, **145**, 43–56 (1999).
3. Zhang, J. et al., Cytotoxic chaetoglobosins from the endophyte *Chaetomium globosum*, Planta. Med., **76**, 1910-1914 (2010).
4. Griffin, J.F. et al., Inhibition of glucose transport in human erythrocytes by cytochalasins: A model based on diffraction studies. Proc. Natl. Acad. Sci. USA, **79**, 3759-3763 (1982).
5. Hu, Y. et al., Nematicidal activity of chaetoglobosin A produced by *Chaetomium globosum* NK102 against *Meloidogyne incognita*. J. Agric. Food. Chem., **61**, 41-46 (2013).

KAA,DWF,MAM 04/13-1