

Product Data Sheet

Product Name: Malformin A

Cat. No.: GC40007

Chemical Properties

Cas. No. 3022-92-2

SMILES O=C1[C@@]([C@@H](C)CC)([H])NC([C@@H](CC(C)C)NC([C@H](C(C)C)NC([C@@H]2NC([C@@H](C)SSC2)N1)=O)=O)=O)=O

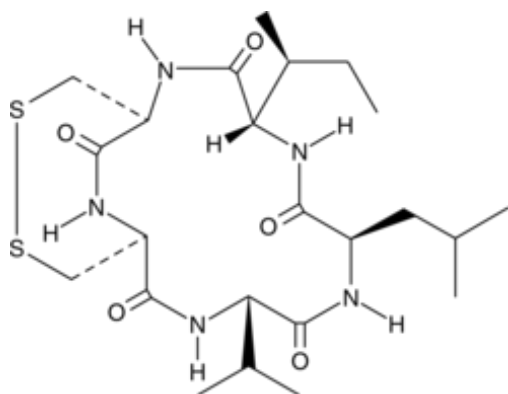
Formula C₂₃H₃₉N₅O₅S₂ M.Wt 529.7

Solubility DMSO: 1 mg/ml Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Malformin A is a cyclopentapeptide fungal metabolite that has been found in *A. niger* and has diverse biological activities. It is a plant growth regulator that induces malformations in plant structure.

Malformin A inhibits replication of tobacco mosaic virus (TMV) in local lesion and leaf-disc assays (IC₅₀s = 19.7 and 45.4 µg/ml, respectively). It is cytotoxic to NCI-H460, MIA PaCa-2, MCF-7, SF-268, and WI-38 cancer cells (IC₅₀s = 70, 50, 100, 70, and 100 nM, respectively), inhibits proliferation of PC3 and LNCaP cells (IC₅₀s = 130 and 90 nM, respectively), and induces apoptosis and necrosis

Caution: Product has not been fully validated for medical applications. For research use only.

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in PC3 and LNCaP cells. Malformin A also increases the accumulation of reactive oxygen species, decreases the mitochondrial membrane potential, and induces autophagy in PC3 and LNCaP cells. It is toxic to mice when administered intraperitoneally (LD50 = 3.1 mg/kg) but not orally up to doses of 50 mg/kg.

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