

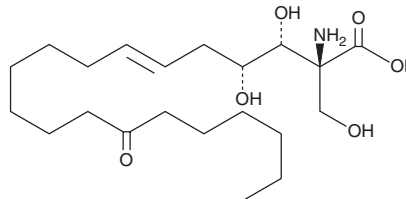
# PRODUCT INFORMATION



## Myriocin

Item No. 63150

**CAS Registry No.:** 35891-70-4  
**Formal Name:** 2S-amino-3R,4R-dihydroxy-2-(hydroxymethyl)-14-oxo-6E-eicosenoic acid  
**Synonyms:** ISP-1, Thermozyomicidin  
**MF:** C<sub>21</sub>H<sub>39</sub>NO<sub>6</sub>  
**FW:** 401.5  
**Purity:** ≥95%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Fungus/*Mycelia sterilia*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Myriocin is supplied as a crystalline solid. A stock solution may be made by dissolving the myriocin in the solvent of choice, which should be purged with an inert gas. Myriocin is soluble in the organic solvent methanol at a concentration of approximately 2 mg/ml.

### Description

Myriocin is an amino fatty acid antibiotic derived from certain thermophylic fungi, in this case *Mycelia sterilia*. It is a potent immunosuppressant having 10- to 100-fold more activity than cyclosporin A.<sup>1</sup> Myriocin is a potent inhibitor of serine palmitoyltransferase ( $K_i = 0.28$  nM), the enzyme that catalyzes the first step of sphingolipid biosynthesis.<sup>2</sup> It disrupts substratum adhesion of melanoma cells.<sup>3</sup> It also suppresses cell proliferation in the murine cytotoxic T-cell line CTLL-2 ( $IC_{50} = 15$  nM) via apoptosis.<sup>2,4</sup> Myriocin suppresses replication of the hepatitis C virus in a murine model.<sup>5</sup>

### References

1. Fujita, T., Inoue, K., Yamamoto, S., *et al.* Fungal metabolites. Part 11. A potent immunosuppressive activity found in *Isaria sinclairii* metabolite. *J. Antibiot. (Tokyo)* **47(2)**, 208-215 (1994).
2. Miyake, Y., Kozutsumi, Y., Nakamura, S., *et al.* Serine palmitoyltransferase is the primary target of a sphingosine-like immunosuppressant, ISP-1/myriocin. *Biochem. Biophys. Res. Commun.* **211(2)**, 396-403 (1995).
3. Hidari, K.I.P.J., Ichikawa, S., Fujita, T., *et al.* Complete removal of sphingolipids from the plasma membrane disrupts cell to substratum adhesion of mouse melanoma cells. *J. Biol. Chem.* **271(24)**, 14636-14641 (1996).
4. Nakamura, S., Kozutsumi, Y., Sun, Y., *et al.* Dual roles of sphingolipids in signaling of the escape from and onset of apoptosis in a mouse cytotoxic T-cell line, CTLL-2. *J. Biol. Chem.* **271(3)**, 1255-1257 (1996).
5. Umehara, T., Sudoh, M., Yasui, F., *et al.* Serine palmitoyltransferase inhibitor suppresses HCV replication in a mouse model. *Biochem. Biophys. Res. Commun.* **346(1)**, 67-73 (2006).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 08/25/2023

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM