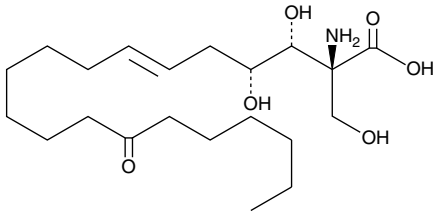
Product Information

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, Thermozymocidin
MF: $C_{21}H_{39}NO_6$
FW: 401.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that myriocin be stored as supplied at -20°C. It will be stable for at least two years. Myriocin is supplied as a crystalline solid. A stock solution may be made by dissolving the myriocin in an organic solvent purged with an inert gas. Myriocin is soluble in methanol. The solubility of myriocin in methanol is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

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.[1] Myriocin is a potent inhibitor of serine palmitoyltransferase (K_i = 0.28 nM), the enzyme that catalyzes the first step of sphingolipid biosynthesis.[2] It disrupts substratum adhesion of melanoma cells.[3] It also suppresses cell proliferation in the murine cytotoxic T-cell line CTLL-2 (IC_{50} = 15 nM) *via* apoptosis.[2,4] Myriocin suppresses replication of the hepatitis C virus (HCV) in a murine model.[5]

References

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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).
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5. Umehara, T., Sudoh, M., Yasui, F., *et al.* Serine palmitoyltransferase inhibitor suppresses HCV replication in a mouse model. *Biochem. Biophys. Res. Commun.* **346**, 67-73 (2006).

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