

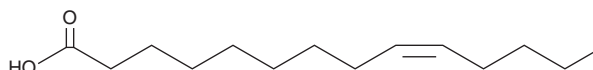
PRODUCT INFORMATION



Myristoleic Acid

Item No. 9002461

CAS Registry No.: 544-64-9
Formal Name: 9Z-tetradecenoic acid
Synonyms: cis-9-Tetradecenoate, FA 14:1, Oleomyristic Acid
MF: C₁₄H₂₆O₂
FW: 226.4
Purity: ≥95%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Myristoleic acid is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of myristoleic acid in these solvents is approximately 2.5 mg/ml and 3 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of myristoleic acid is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of myristoleic acid in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Myristoleic acid is a monounsaturated fatty acid found in the fruit extract of *S. repens* and in dairy extracts.^{1,2} It induces apoptosis and necrosis in human prostate cancer LNCaP cells at a rate of 8.8% and 8.1%, respectively.¹ Myristoleic acid inhibits *C. albicans* germination *in vitro* with a minimal inhibitory concentration (MIC) of 9 μM.² Furthermore, myristoleic acid inhibits osteogenesis *in vitro* via interference with cytoskeletal rearrangement and prevents RANKL-induced bone loss and osteoclast formation in mice.³

References

1. Iguchi, K., Okumura, N., Usui, S., *et al.* Myristoleic acid, a cytotoxic component in the extract from *Serenoa repens*, induces apoptosis and necrosis in human prostatic LNCaP cells. *Prostate* **47(1)**, 59-65 (2001).
2. Clément, M., Tremblay, J., Lange, M., *et al.* Whey-derived free fatty acids suppress the germination of *Candida albicans* *in vitro*. *FEMS Yeast Res.* **7(2)**, 276-285 (2007).
3. Kwon, J.O., Jin, W.J., Kim, B., *et al.* Myristoleic acid inhibits osteoclast formation and bone resorption by suppressing the RANKL activation of Src and Pyk2. *Eur. J. Pharmacol.* **768**, 189-198 (2015).

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.

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