

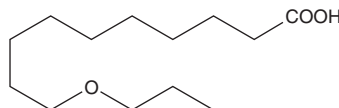
Product Information



O-11

Catalog No. 90510

CAS Registry No.: 119290-12-9
Formal Name: 10-propoxy-decanoic acid
Synonyms: 11-Oxatetradecanoic Acid
MF: C₁₃H₂₆O₃
FW: 230.3
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that O-11 be stored as supplied at -20°C. It should be stable for at least one year.

O-11 is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of O-11 in these solvents is approximately 20 mg/ml.

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 O-11 is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of O-11 in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

O-11 is an analog of the fully saturated, 14-carbon fatty acid myristic acid, in which the methylene group at position 11 is replaced with oxygen. It is highly effective and selective at killing *Trypanosoma brucei*, the protozoan parasite responsible for African sleeping sickness, exhibiting an LD₅₀ of less than 1 μM in a cell culture assay.^{1,2} The toxic effects of O-11 appear to be caused by its ability to inhibit the incorporation of a single myristate into the GPI anchor of the variant surface glycoprotein (VSG), a protein critical for evading the host immune response.¹ O-11 exhibits essentially no anti-fungal activity when assayed using *C. neoformans*, but does have a minor inhibitory effect on HIV-1 replication in T-lymphocytes.³

References

1. Doering, T.L., Raper, J., Buxbaum, L.U., *et al.* An analog of myristic acid with selective toxicity for African trypanosomes. *Science* **252**, 1851-1854 (1991).
2. Doering, T.L., Lu, T., Werbovetz, K.A. *et al.* Toxicity of myristic acid analogs toward African trypanosomes. *Proc. Natl. Acad. Sci. USA* **91**, 9735-9739 (1994).
3. Langner, C.A., Lodge, J.K., Travis, S.J., *et al.* 4-Oxatetradecanoic acid is fungicidal for *Cryptococcus neoformans* and inhibits replication of human immunodeficiency virus I. *J. Biol. Chem.* **267**, 17159-17169 (1992).

Related Products

Nitazoxanide - Item No. 13692 • Oleic Acid - Item No. 90260 • 2-Hydroxymyristic Acid - Item No. 90390 • 3-Thiatetradecanoic Acid - Item No. 90500

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

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