

Produktinformation



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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic in



PRODUCT INFORMATION



7,10-dihydroxy-8(E)-Octadecenoic Acid

Item No. 33447

CAS Registry No.: 131021-99-3

7,10-dihydroxy-8-octadecenoic acid Formal Name:

Synonym: DOD MF: $C_{18}H_{34}O_{4}$ FW: 314.5 **Purity:** ≥95%

Supplied as: A crystalline solid

Storage: -20°C Stability: ≥2 years

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

Laboratory Procedures

7,10-dihydroxy-8(E)-Octadecenoic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 7,10-dihydroxy-8(E)-octadecenoic acid in the solvent of choice, which should be purged with an inert gas. 7,10-dihydroxy-8(E)-Octadecenoic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 7,10-dihydroxy-8(E)-octadecenoic acid in these solvents is approximately 100, 20, and 15 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. Organic solvent-free aqueous solutions of 7,10-dihydroxy-8(E)-octadecenoic acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 7,10-dihydroxy-8(E)-octadecenoic acid in PBS (pH 7.2) is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

7,10-dihydroxy-8(E)-Octadecenoic acid is a hydroxy fatty acid and metabolite of oleic acid (Item Nos. 90260 | 24659) that is produced by P. aeruginosa from vegetable oils. It is active against the food-borne pathogenic bacteria S. aureus, S. typhimurium, L. monocytogenes, B. subtilis, and E. coli (MIC₅₀s = 31.3, 125, 125, 62.5, and 250 μ g/ml, respectively), as well as the plant pathogenic bacteria Erwinia, R. solanacearum, C. glutamicum, and P. syringae (MICoos = 125, 125, 250, and 500 μg/ml, respectively).1,2

References

- 1. Sohn, H.-R., Bae, J.-H., Hou, C.T., et al. Antibacterial activity of a 7,10-dihydroxy-8(E)-octadecenoic acid against plant pathogenic bacteria. Enzyme Microb. Technol. 53(3), 152-153 (2013).
- 2. Chen, K.Y., Kim, I.H., Hou, C.T., et al. Monoacylglycerol of 7,10-dihydroxy-8(E)-octadecenoic acid enhances antibacterial activities against food-borne bacteria. J. Agric. Food Chem. 67(29), 8191-8196 (2019).

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

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

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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