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- Trockeneiszuschlag
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- Expressversand

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](https://www.linkedin.com/company/szaboscandic) 

PRODUCT INFORMATION



Linoleic Acid-biotin

Item No. 10010623

Formal Name: 9Z,12Z-octadecadienoyl-N'-biotinoyl-1,5-diaminopentane

MF: C₂₈H₄₈N₄O₃S

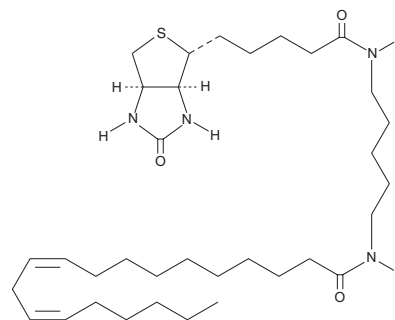
FW: 520.8

Purity: ≥95%

Supplied as: A solution in ethanol

Storage: -20°C

Stability: ≥1 year



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

Laboratory Procedures

Linoleic acid-biotin 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 linoleic acid-biotin in these solvents is approximately 50 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. For greater aqueous solubility, linoleic acid-biotin can be directly dissolved in 0.1 M Na₂CO₃ (solubility of approximately 0.5 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. We do not recommend storing the aqueous solution for more than one day.

Description

Linoleic acid is an essential fatty acid and one of the most abundant polyunsaturated fatty acids (PUFAs) in the western diet. Deficiencies in linoleic acid are linked to defective wound healing, growth retardation, and dermatitis.^{1,2} Linoleic acid is metabolized by 15-LO in both plants and animals to form 9- and 13-HODE.³ Linoleic acid-biotin was designed to allow linoleic acid to be detected in complexes with protein-binding partners such as fatty acid binding proteins (FABPs). Biotinylated lipids have been used to capture lipid-associated proteins in the study of lipid signaling and transport.⁴

References

1. Søyland, E., Fund, J., Rajka, G., *et al.* Effect of dietary supplementation with very-long-chain n-3 fatty acids in patients with psoriasis. *N. Engl. J. Med.* **328(25)**, 1812-1816 (1993).
2. Hashimoto, A., Katagiri, M., Torii, S., *et al.* Effect of the dietary α -linolenate/linoleate balance on leukotriene production and histamine release in rats. *Prostaglandins* **36(1)**, 3-16 (1988).
3. Vick, B.A. Oxygenated fatty acids of the lipoxygenase pathway. *Lipid metabolism in plants*. Moore, T.S., Jr., editor, 1st ed., CRC Press (1993).
4. Brock, T.G. Capturing proteins that bind polyunsaturated fatty acids: Demonstration using arachidonic acid and eicosanoids. *Lipids* **43(2)**, 161-169 (2008).

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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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