



**SZABO
SCANDIC**

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- 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



PRODUCT INFORMATION

(±)-10-hydroxy-12(Z)-Octadecenoic Acid

Item No. 37281

CAS Registry No.: 34932-12-2

Formal Name: 10-hydroxy-12Z-octadecenoic acid

Synonyms: 12(Z)-10-HOME,

10-hydroxy-cis-12-Octadecenoic Acid

MF: C₁₈H₃₄O₃

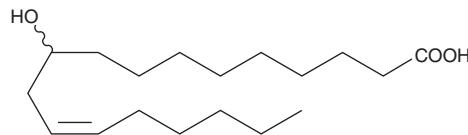
FW: 298.5

Purity: ≥98%

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.

Description

(±)-10-hydroxy-12(Z)-Octadecenoic acid is a racemic mixture of 10(R)-hydroxy-12(Z)-octadecenoic acid and 10(S)-hydroxy-12(Z)-octadecenoic acid. 10(S)-hydroxy-12(Z)-Octadecanoic acid, also known as HYA™, is a gut microbiome metabolite of linoleic acid (Item Nos. 90150 | 90150.1 | 21909) that is formed by conjugated linoleic acid hydrolase (CLA-HY) as an intermediate in CLA biosynthesis.^{1,2} 10(S)-hydroxy-12(Z)-Octadecenoic acid (30 μM) inhibits LPS-induced nitric oxide (NO) production, ERK phosphorylation, and increases in inducible NO synthase (iNOS) levels in BV-2 microglia cells.³ It reduces TNF-α, NO₂, and IL-10 levels in LPS-stimulated and -unstimulated isolated dendritic bone marrow cells when used at a concentration of 100 μM.⁴ 10(S)-hydroxy-12(Z)-Octadecenoic acid (100 μM) decreases LPS-induced maturation of the dendritic cell population within isolated mouse bone marrow cells. It induces calcium mobilization in HEK293 cells expressing the human free fatty acid receptor GPR40 or GPR120 (EC₅₀s = 7.51 and 8.1 μM, respectively).⁵ *In vivo*, 10(S)-hydroxy-12(Z)-octadecenoic acid (1 g/kg) increases GLP-1 release and reduces body weight in a mouse model of high-fat diet-induced obesity.

References

- Takeuchi, M., Kishino, S., Hirata, A., et al. Characterization of the linoleic acid Δ9 hydratase catalyzing the first step of polyunsaturated fatty acid saturation metabolism in *Lactobacillus plantarum* AKU 1009a. *J. Biosci. Bioeng.* **119**(6), 636-641 (2015).
- Kishino, S., Takeuchi, M., Park, S.-B., et al. Polyunsaturated fatty acid saturation by gut lactic acid bacteria affecting host lipid composition. *Proc. Natl. Acad. Sci. USA* **110**(44), 17808-17813 (2013).
- Ikeguchi, S., Izumi, Y., Kitamura, N., et al. Inhibitory effect of the gut microbial linoleic acid metabolites, 10-oxo-trans-11-octadecenoic acid and 10-hydroxy-cis-12-octadecenoic acid, on BV-2 microglial cell activation. *J. Pharmacol. Sci.* **138**(1), 9-15 (2018).
- Bergamo, P., Luongo, D., Miyamoto, J., et al. Immunomodulatory activity of a gut microbial metabolite of dietary linoleic acid, 10-hydroxy-cis-12-octadecenoic acid, associated with improved antioxidant/detoxifying defences. *J. Funct. Foods* **11**, 192-202 (2014).
- Miyamoto, J., Igarashi, M., Watanabe, K., et al. Gut microbiota confers host resistance to obesity by metabolizing dietary polyunsaturated fatty acids. *Nat. Commun.* **10**(1), 4007 (2019).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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