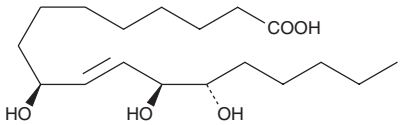
PRODUCT INFORMATION

9(S),12(S),13(S)-TriHOME

Item No. 10005143

CAS Registry No.:	97134-11-7
Formal Name:	9S,12S,13S-trihydroxy-10E-octadecenoic acid
Synonyms:	(–)-Pinellic Acid, 9S,12S,13S-Pinellic Acid
MF:	$C_{18}H_{34}O_5$
FW:	330.5
Purity:	≥98%
Supplied as:	A 200 µg/ml 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.

Description

9(S),12(S),13(S)-TriHOME is a linoleic acid-derived oxylipin that has diverse biological activities.[1-4] It has been found in various plants and is produced in human eosinophils in a 15-lipoxygenase-dependent, soluble epoxide hydrolase-independent manner.[1,5] 9(S),12(S)13(S)-TriHOME inhibits antigen-induced β-hexosaminidase release from RBL-2H3 mast cells (IC_{50} = 28.7 µg/ml).[2] It inhibits LPS-induced nitric oxide (NO) production in BV-2 microglia (IC_{50} = 40.95 µM).[3] *In vivo*, 9(S),12(S),13(S)-TriHOME (1 g/animal) enhances the antiviral IgA and IgG antibody responses induced by a nasal influenza hemagglutinin (HA) vaccine by 5.2- and 2-fold, respectively, in mice.[4]

References

1. Hamberg, M. and Hamberg, G. Peroxygenase-catalyzed fatty acid epoxidation in cereal seeds: Sequential oxidation of linoleic acid into 9(*S*),12(*S*),13(*S*)-trihydroxy-10(*E*)-octadecenoic acid. *Plant Physiol.* **110(3)**, 807-815 (1996).
2. Hong, S.S. and Oh, J.S. Inhibitors of antigen-induced degranulation of RBL-2H3 cells isolated from wheat bran. *J. Korean Soc. Appl. Biol. Chem.* **55**, 69-74 (2012).
3. Kim, C.S., Kwon, O.W., Kim, S.Y., *et al.* Five new oxylipins from *Chaenomeles sinensis*. *Lipids* **49(11)**, 1151-1159 (2014).
4. Shirahata, T., Sunazuka, T., Yoshida, K., *et al.* Total synthesis, elucidation of absolute stereochemistry, and adjuvant activity of trihydroxy fatty acids. *Tetrahedron* **62(40)**, 9483-9496 (2006).
5. Fuchs, D., Tang, X., Johnsson, A.-K., *et al.* Eosinophils synthesize trihydroxyoctadecenoic acids (TriHOMEs) via a 15-lipoxygenase dependent process. *Biochim. Biophys. Acta Mol. Cell Biol. Lipids* **1865(4)**, 158611 (2020).

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