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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

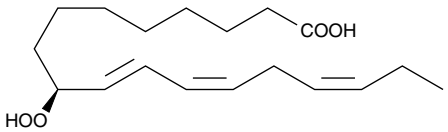
linkedin.com/company/szaboscandic

Product Information

9(S)-HpOTrE

Item No. 45120

CAS Registry No.:	111004-08-1
Formal Name:	9S-hydroperoxy-10E,12Z,15Z-octadecatrienoic acid
MF:	$C_{18}H_{30}O_4$
FW:	310.4
Purity:	≥98%
Stability:	≥6 months at -80°C
Supplied as:	A solution in ethanol
UV/Vis:	λ_{max}: 236 nm ε: 23,000



Laboratory Procedures

For long term storage, we suggest that 9(S)-HpOTrE be stored as supplied at -80°C. It should be stable for at least six months.

9(S)-HpOTrE 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 9(S)-HpOTrE 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. If an organic solvent-free solution of 9(S)-HpOTrE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 9(S)-HpOTrE in PBS (pH 7.2) is approximately 1 mg/ml. Store aqueous solutions of 9(S)-HpOTrE on ice and use within 15 minutes of preparation.

9(S)-HpOTrE is a monohydroperoxy polyunsaturated fatty acid produced by the action of 5(S)-lipoxygenase on α-linolenic acid.[1] It can be further metabolized to colnelenic acid by a divinyl ether synthase activity found in garlic and potato microsomal fractions.[2,3] 9(S)-HpOTrE also serves as a substrate for further oxidation by both soybean and potato lipoxygenases, resulting in the 9,16-dihydroperoxy acid.[4,5] The suicide inactivation of lipoxygenases when 9(S)-HpOTrE is used as a substrate is thought to occur *via* formation of an unstable epoxide.[6,7]

References

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Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com