

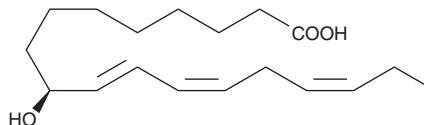
PRODUCT INFORMATION



9(S)-HOTrE

Item No. 39420

CAS Registry No.: 89886-42-0
Formal Name: 9S-hydroxy-10E,12Z,15Z-octadecatrienoic acid
MF: C₁₈H₃₀O₃
FW: 294.4
Purity: ≥98%
UV/Vis.: λ_{max}: 236 nm
Supplied as: A 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.

Laboratory Procedures

9(S)-HOTrE 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. 9(S)-HOTrE is miscible in these solvents.

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)-HOTrE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 9(S)-HOTrE in PBS (pH 7.2) is approximately 0.80 mg/ml. For greater aqueous solubility, 9(S)-HOTrE can be directly dissolved in 0.1 M Na₂CO₃ (2 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

9(S)-HOTrE is a monohydroxy polyunsaturated fatty acid (PUFA) produced by the action of 5-lipoxygenase on α-linolenic acid.¹ 9(S)-HOTrE is predominantly localized in cellular ester lipids of *Glechoma hederacea* leaves and is partially released during artificial dehydration.² The biological role of 9(S)-HOTrE in *G. hederacea* leaves is still undetermined, but it may play a role in natural senescence.² 9(S)-HOTrE is an inhibitor of spore germination and germ tube elongation of rice blast fungus with ED₅₀ values of 45 and 30 ppm, respectively.³

References

- Galliard, T. and Phillips, D.R. Lipoxygenase from potato tubers. Partial purification and properties of an enzyme that specifically oxygenates the 9-position of linoleic acid. *Biochem. J.* **124**, 431-438 (1971).
- Kühn, H., Wisner, R., Alder, L., et al. Occurrence of free and esterified lipoxygenase products in leaves of *Glechoma hederacea* L. and other Labiatae. *Eur. J. Biochem.* **186**, 155-162 (1989).
- Namai, T., Kato, T., Yamaguchi, Y., et al. Anti-rice blast activity and resistance induction of C-18 oxygenated fatty acids. *Biosci. Biotech. Biochem.* **57**, 611-613 (1993).

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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