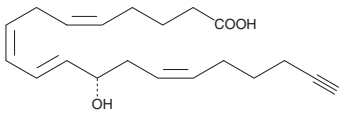
PRODUCT INFORMATION

12(S)-HETE-19,20-alkyne

Item No. 9001937

Formal Name: (S,5Z,8Z,10E,14Z)-12-hydroxyicosa-5,8,10,14-tetraen-19-ynoic acid
Synonyms: Click Tag™ 12(S)-HETE-19,20-alkyne, 12(S)-Hydroxyeicosatetraenoic Acid-19,20-alkyne
MF: $C_{20}H_{28}O_3$
FW: 316.4
Purity: ≥97%
UV/Vis.: λ_{max}: 236 nm
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

12(S)-HETE-19,20-alkyne 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 ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. 12(S)-HETE-19,20-alkyne is miscible in these solvents.

12(S)-HETE-19,20-alkyne is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 12(S)-HETE-19,20-alkyne should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. The solubility of 12(S)-HETE-19,20-alkyne in PBS (pH 7.2) is approximately 0.5 mg/ml. For greater aqueous solubility, 12(S)-HETE-19,20-alkyne can be directly dissolved in 0.1 M Na_2CO_3 (solubility of 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

12(S)-HETE (Item No. 34570) is the predominant lipoxygenase product of mammalian platelets.[1] It enhances tumor cell adhesion to endothelial cells, fibronectin, and the subendothelial matrix at 0.1 µM.[2,3] 12(S)-HETE-19,20-alkyne is a form of 12(S)-HETE with an ω-terminal alkyne. The terminal alkyne group can be used in click chemistry linking reactions, to tag 12(S)-HETE with fluorescent or biotinylated labels for analysis of its metabolism and biological activity.[4,5]

References

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2. Grossi, I.M., Fitzgerald, L.A., Umbarger, L.A., *et al.* Bidirectional control of membrane expression and/or activation of the tumor cell IRGpIIb/IIIa receptor and tumor cell adhesion by lipoxygenase products of arachidonic acid and linoleic acid. *Cancer Res.* **49(4)**, 1029-1037 (1989).
3. Honn, K.V., Nelson, K.K., Renaud, C., *et al.* Fatty acid modulation of tumor cell adhesion to microvessel endothelium and experimental metastasis. *Prostaglandins* **44(5)**, 413-429 (1992).
4. Kolb, H.C. and Sharpless, K.B. The growing impact of click chemistry on drug discovery. *Drug Discov. Today* **8(24)**, 1128-1137 (2003).
5. Lutz, J.-F. and Zarafshani, Z. Efficient construction of therapeutics, bioconjugates, biomaterials and bioactive surfaces using azide-alkyne "click" chemistry. *Adv. Drug Deliv. Rev.* **60(9)**, 958-970 (2008).

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