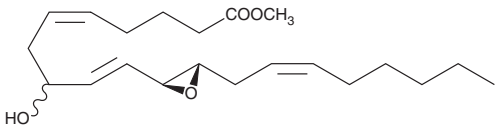
PRODUCT INFORMATION

Hepoxilin A_3 methyl ester

Item No. 22151

Formal Name:	methyl (5Z,9E)-8-hydroxy-10-((2S,3S)-3-((Z)-oct-2-en-1-yl)oxiran-2-yl)deca-5,9-dienoate
Synonyms:	HxA_3 methyl ester, SFE 21:4;O2
MF:	$C_{21}H_{34}O_4$
FW:	350.5
Purity:	≥98% (mixture of isomers)
Supplied as:	A solution in hexane/1% triethylamine (TEA)
Storage:	-80°C
Stability:	≥1 year



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

The naturally occurring free acid of HxA_3 is too unstable for storage. The methyl ester is provided because of its increased stability. However, both the free acid and the methyl ester decompose rapidly under acidic conditions. Before performing biological experiments, using HxA3 free acid, the HxA_3 methyl ester must be hydrolyzed to HxA_3. Alkaline hydrolysis of HxA_3 methyl ester can be performed as follows:

Prepare a hydrolysis solution consisting of degassed acetone (8 ml) and 0.25 M NaOH (2 ml) and cool it to 0°C. Evaporate the hexane/1% TEA solution of HxA_3 methyl ester just to dryness under nitrogen and immediately add 4 ml of the hydrolysis solution per 1 mg of HxA_3 methyl ester. Allow the reaction to stand under an inert atmosphere of nitrogen or argon at 22°C for 40 minutes. The resulting basic solution of HxA_3 will be stable for about 60 minutes at room temperature or for 12 hours at 0°C. Dilutions of this HxA_3 stock solution can be made directly into aqueous buffers. Incorporation of albumin in the buffers will increase the stability of HxA_3 in aqueous media.[1] Solutions not used within 12 hours of hydrolysis should be discarded.

Description

HxA_3 methyl ester is an ester version of HxA_3 that more potently induces calcium release from intracellular stores and then induces calcium influx in suspended human neutrophils.[1] HxA_3 is produced from the intermediate 12-HpETE (Item Nos. 10138 | 44570) in the metabolic pathway for arachidonic acid (Item No. 90010).[2]

References

1. Reynaud, D., Demin, P.M., Sutherland, M., *et al. FEBS Lett.* **446(2-3)**, 236-238 (1999).
2. Nigam, S. and Zafiriou, M.-P. *Biochem. Biophys. Res. Commun.* **338(1)**, 161-168 (2005).

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