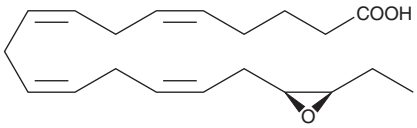
PRODUCT INFORMATION

(±)17(18)-EpETE MaxSpec® Standard

Item No. 25367



NOTE: Relative stereochemistry shown in chemical structure

Formal Name: (±)17,18-epoxy-5Z,8Z,11Z,14Z-eicosatetraenoic acid
Synonyms: (±)17,18-EEQ, (±)17,18-epoxy Eicosatetraenoic Acid
MF: $C_{20}H_{30}O_3$
FW: 318.5
Purity: ≥95%
Supplied as: A solution in ethanol; in a deactivated glass ampule
Concentration: 100 µg/ml (nominal); see certificate of analysis for verified concentration
Storage: -20°C
Stability: ≥7 years; *Stability testing is ongoing to ensure concentration accuracy. The certificate of analysis and product expiry date will be updated upon completion of testing.*
Special Conditions: Store upright and unopened at -20°C. Warm to room temperature prior to opening. Light sensitive.

Description

The epoxygenase pathway is one of the three major branches of eicosanoid biosynthesis.[1,2] However, the cytochrome P450 metabolites of eicosapentaenoic acid (EPA; Item No. 90110) and docosahexaenoic acid (DHA; Item No. 90310) have been little studied relative to arachidonate epoxygenase metabolites. (±)17(18)-EpETE is biosynthesized by the stereospecific epoxidation of the ω-3 bond of EPA. (±)17(18)-EpETE at 100 nM was found to be a potent and selective activator of BK-type calcium activated potassium ion channels in vascular smooth muscle cells.[3] It is possible that some of the physiologic effects of fish oil-enhanced diets could be due to this epoxygenase metabolite.

(±)17(18)-EpETE MaxSpec® standard is a quantitative grade standard of (±)17(18)-EpETE (Item No. 50861) that has been prepared specifically for mass spectrometry or any application where quantitative reproducibility is required. The solution has been prepared gravimetrically and is supplied in a deactivated glass ampule sealed under argon. The concentration was verified by comparison to an independently prepared calibration standard. This (±)17(18)-EpETE MaxSpec® standard is guaranteed to meet identity, purity, stability, and concentration specifications and is provided with a batch-specific certificate of analysis. Ongoing stability testing is performed to ensure the concentration remains accurate throughout the shelf life of the product. ***Note:*** *The amount of solution added to the vial is in excess of the listed amount. Therefore, it is necessary to accurately measure volumes for preparation of calibration standards. Follow recommended storage and handling conditions to maintain product quality.*

References

1. Fitzpatrick, F.A. and Murphy, R.C. Cytochrome P-450 metabolism of arachidonic acid: Formation and biological actions of 'epoxygenase'-derived eicosanoids. *Pharmacol. Rev.* **40(4)**, 229-241 (1989).
2. Oliw, E.H., Bylund, J., and Herman, C. Bisallylic hydroxylation and epoxidation of polyunsaturated fatty acids by cytochrome P450. *Lipids* **31(10)**, 1003-1021 (1996).
3. Lauterbach, B., Barbosa-Sicard, E., Wang, M.H., *et al.* Cytochrome P450-dependent eicosapentaenoic acid metabolites are novel BK channel activators. *Hypertension* **39(2 Pt. 2)**, 609-613 (2002).

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