

# PRODUCT INFORMATION



## (±)5(6)-DiHET MaxSpec® Standard

Item No. 10007264

CAS Registry No.: 213382-49-1

Formal Name: (±)5,6-dihydroxy-8Z,11Z,14Z-eicosatrienoic acid

Synonym: (±)5,6-DiHETrE

MF: C<sub>20</sub>H<sub>34</sub>O<sub>4</sub>

FW: 338.5

Purity: ≥95%

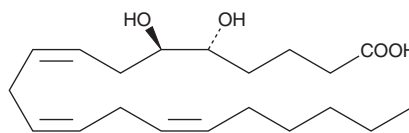
Supplied as: A solution in ethanol; in a deactivated glass ampule

Concentration: 10 µg/ml (nominal); see certificate of analysis for verified concentration

Storage: -20°C

Stability: ≥5 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.



NOTE: Relative stereochemistry shown in chemical structure

### Description

5(6)-DiHET is a fully racemic version of the enantiomeric forms biosynthesized from 5(6)-EET (Item Nos. 50211 | 10007260) by epoxide hydrolases.<sup>1</sup> 5(6)-DiHET can be used to quantify 5(6)-EET due to the conversion of 5(6)-EET to 5(6)-δ-lactone in solution.<sup>2</sup> 5(6)-DiHET activates large conductance calcium-activated potassium (K<sub>Ca</sub>1.1/BK) channels in smooth muscle cells from rat small coronary arteries.<sup>3</sup> It is a substrate for sheep seminal vesicle COX, producing 5,6-dihydroxy prostaglandin E<sub>1</sub> and F<sub>1α</sub> metabolites *in vitro*.<sup>4</sup> 5(6)-DiHET levels decrease in plasma in a high-fat diet-induced rat model of hyperlipidemia.<sup>5</sup>

(±)5(6)-DiHET MaxSpec® standard is a quantitative grade standard of (±)5(6)-DiHET (Item No. 51211) 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 (±)5(6)-DiHET 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. Oliw, E.H., Guengerich, F.P., and Oates, J.A. Oxygenation of arachidonic acid by hepatic monooxygenases. Isolation and metabolism of four epoxide intermediates. *J. Biol. Chem.* **257**(7), 3771-3781 (1982).
2. Rashid, M., Manivet, P., Nishio, H., *et al.* Identification of the binding sites and selectivity of sarpogrelate, a novel 5-HT<sub>2</sub> antagonist, to human 5-HT<sub>2A</sub>, 5-HT<sub>2B</sub> and 5-HT<sub>2C</sub> receptor subtypes by molecular modeling. *Life Sci.* **73**(2), 193-207 (2003).
3. Lu, T., Katakam, P.V.G., VanRollins, M., *et al.* Dihydroxyeicosatrienoic acids are potent activators of Ca<sup>2+</sup>-activated K<sup>+</sup> channels in isolated rat coronary arterial myocytes. *J. Physiol.* **534**(Pt 3), 651-667 (2001).
4. Oliw, E.H. Biosynthesis of 5,6-dihydroxyprostaglandin E<sub>1</sub> and F<sub>1α</sub> from 5,6-dihydroxyeicosatrienoic acid by ram seminal vesicles. *Biochim. Biophys. Acta.* **795**(2), 384-391 (1984).
5. Miao, H., Zhao, Y.-H., Vaziri, N.D., *et al.* Lipidomics biomarkers of diet-induced hyperlipidemia and its treatment with *Poria cocos*. *J. Agric. Food Chem.* **64**(4), 969-979 (2016).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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