

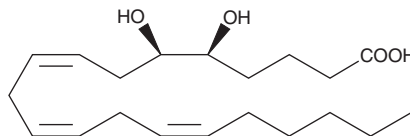
# PRODUCT INFORMATION



## (±)5(6)-DiHET

Item No. 51211

**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:** ≥98%  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:** ≥1 year



NOTE: Relative stereochemistry shown in chemical structure

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

### Laboratory Procedures

(±)5(6)-DiHET 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. The solubility of (±)5(6)-DiHET in these solvents is approximately 50 mg/ml.

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 (±)5(6)-DiHET is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of (±)5(6)-DiHET in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### 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)- $\delta$ -lactone in solution.<sup>2</sup> 5(6)-DiHET activates large conductance calcium-activated potassium (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>1 $\alpha$</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>

### References

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- 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).
- Lu, T., Katakam, P.V.G., VanRollins, M.W., *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).
- Oliw, E.H. Biosynthesis of 5,6-dihydroxyprostaglandin E<sub>1</sub> and F<sub>1 $\alpha$</sub>  from 5,6-dihydroxyeicosatrienoic acid by ram seminal vesicles. *Biochim. Biophys. Acta* **795**, 384-391 (1984).
- 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.

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