

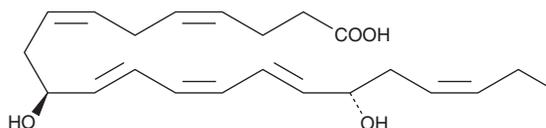
# PRODUCT INFORMATION



## 10(S),17(S)-DiHDHA

Item No. 10008128

**CAS Registry No.:** 871826-47-0  
**Formal Name:** 10(S),17(S)-dihydroxy-4Z,7Z,11E,13Z,15E,19Z-docosahexaenoic acid  
**Synonyms:** 10(S),17(S)-DiHDoHE, PDX, Protectin DX  
**MF:** C<sub>22</sub>H<sub>32</sub>O<sub>4</sub>  
**FW:** 360.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 270 nm  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

10(S),17(S)-DiHDHA 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. 10(S),17(S)-DiHDHA is miscible in these solvents.

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 10(S),17(S)-DiHDHA is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 10(S),17(S)-DiHDHA in PBS, pH 7.2, is approximately 0.5 mg/ml. For greater aqueous solubility, 10(S),17(S)-DiHDHA can be directly dissolved in 0.1 M Na<sub>2</sub>CO<sub>3</sub> (solubility of 1 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

10(S),17(S)-DiHDHA is a DHA metabolite, also referred to as protectin DX (PDX).<sup>1,2</sup> It is produced by an apparent double lipoxygenase (LO)-mediated reaction in murine peritonitis exudates, in suspensions of human leukocytes, or by soybean 15-LO incubated with DHA.<sup>1,3</sup> It differs from protectin D1 with respect to the stereochemistry of the C-10 hydroxyl and the double bond configuration at the 13 and 15 positions. 10(S),17(S)-DiHDHA blocks neutrophil infiltration in murine peritonitis by 20-25% at a dose of 1 ng/mouse.<sup>3</sup> It also inhibits platelet activation by both impairing thromboxane (TX) synthesis and TX receptor activation.<sup>1,4</sup>

### References

1. Chen, P., Fenet, B., Michaud, S., *et al. FEBS Lett.* **583**, 3478-84 (2009).
2. Balas, L., Guichardant, M., Durand, T., *et al. Biochimie* **99C**, 1-7 (2014).
3. Serhan, C.N., Gotlinger, K., Hong, S., *et al. J. Immunol.* **176**, 1848-1859 (2006).
4. Chen, P., Véricel, E., Lagarde, M., *et al. FASEB J.* **25**, 382-8 (2011).

#### 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.

Copyright Cayman Chemical Company, 05/14/2024

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM