

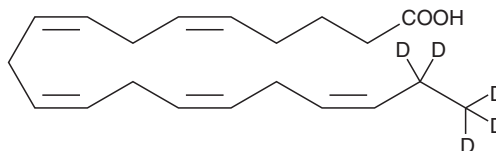
# PRODUCT INFORMATION



## Eicosapentaenoic Acid-d<sub>5</sub>

Item No. 10005056

**CAS Registry No.:** 1197205-73-4  
**Formal Name:** 5Z,8Z,11Z,14Z,17Z-eicosapentaenoic-19,19,20,20,20-d<sub>5</sub> acid  
**Synonyms:** EPA-d<sub>5</sub>, FA 20:5-d<sub>5</sub>, Timnodonic Acid-d<sub>5</sub>  
**MF:** C<sub>20</sub>H<sub>25</sub>D<sub>5</sub>O<sub>2</sub>  
**FW:** 307.5  
**Chemical Purity:** ≥98% (Eicosapentaenoic Acid)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>5</sub>); ≤1% d<sub>0</sub>  
**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

Eicosapentaenoic acid-d<sub>5</sub> (EPA-d<sub>5</sub>) is intended for use as an internal standard for the quantification of EPA (Item Nos. 90110 | 90110.1 | 26415) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

EPA-d<sub>5</sub> 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 EPA-d<sub>5</sub> in these solvents is approximately 100 mg/ml.

### Description

EPA is an ω-3 fatty acid abundantly available in marine organisms. It is oxygenated by COX-1 and COX-2 at rates of about 5% and 30%, respectively, compared to arachidonic acid.<sup>1</sup> EPA has been shown to offer protection against coronary heart disease, thrombosis, ischemic brain injury, scaly dermatitis, and some inflammatory diseases.<sup>2,3</sup>

### References

1. Wada, M., DeLong, C.J., Hong, Y.H., *et al.* Enzymes and receptors of prostaglandin pathways with arachidonic acid-derived *versus* eicosapentaenoic acid-derived substrates and products. *J. Biol. Chem.* **282**(31), 22254-22266 (2007).
2. Yerram, N.R., Moore, S.A., and Spector, A.A. Eicosapentaenoic acid metabolism in brain microvessel endothelium: Effect on prostaglandin formation. *J. Lipid Res.* **30**, 1747-1757 (1989).
3. Takeuchi, H., Inoue, J., Yoshida, M., *et al.* Dietary effects of n-3 eicosapentaenoic acid on essential fatty acid-deficiency symptoms of rats. *Agric. Biol. Chem.* **53**, 3225-3232 (1989).

#### 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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