

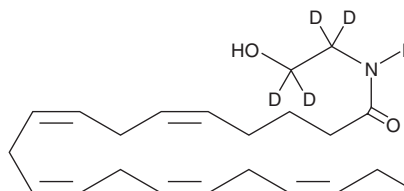
# PRODUCT INFORMATION



## Eicosapentaenoyl Ethanolamide-d<sub>4</sub>

Item No. 9001835

CAS Registry No.: 946524-41-0  
Formal Name: N-(2-hydroxyethyl-1,1',2,2'-d<sub>4</sub>)-  
5Z,8Z,11Z,14Z,17Z-eicosapentaenamide  
Synonym: EPEA-d<sub>4</sub>  
MF: C<sub>22</sub>H<sub>31</sub>D<sub>4</sub>NO<sub>2</sub>  
FW: 349.5  
Chemical Purity: ≥98% (EPEA)  
Deuterium  
Incorporation: ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</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

Eicosapentaenoyl ethanolamide (EPEA)-d<sub>4</sub> is intended for use as an internal standard for the quantification of EPEA 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).

EPEA-d<sub>4</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 ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of EPEA-d<sub>4</sub> in these solvents is approximately 30 mg/ml.

### Description

EPEA is an N-acylethanolamide that inhibits dietary-restriction-induced lifespan extension in wild type and TOR pathway mutant nematodes.<sup>1</sup> Produced endogenously from eicosapentaenoic acid, EPEA serves as a metabolic signal that couples nutrient availability with growth and lifespan. EPEA also has anti-inflammatory properties, suppressing the expression of IL-6 and MCP-1 in 3T3-L1 adipocytes in response to lipopolysaccharide.<sup>2</sup>

### References

1. Lucanic, M., Held, J.M., Vantipalli, M.C., *et al.* N-acylethanolamine signalling mediates the effect of diet on lifespan in *Caenorhabditis elegans*. *Nature* 473(7346), 226-9 (2011).
2. Balvers, M.G., Verhoeckx, K.C., Plastina, P., *et al.* Docosahexaenoic acid and eicosapentaenoic acid are converted by 3T3-L1 adipocytes to N-acyl ethanolamines with anti-inflammatory properties. *Biochim. Biophys. Acta* 1801(10), 1107-1114 (2010).

#### 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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