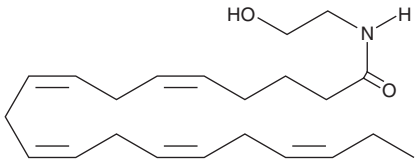
PRODUCT INFORMATION

Eicosapentaenoyl Ethanolamide

Item No. 10964

CAS Registry No.:	109001-03-8
Formal Name:	N-(2-hydroxyethyl)-5Z,8Z,11Z,14Z,17Z-eicosapentaenamide
Synonym:	EPEA
MF:	$C_{22}H_{35}NO_2$
FW:	345.5
Purity:	≥98%
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) 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 EPEA in these solvents is approximately 30 mg/ml.

EPEA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of EPEA should be diluted with the aqueous buffer of choice. EPEA has a solubility of 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

EPEA is an N-acylethanolamide that inhibits dietary-restriction-induced lifespan extension in wild type and TOR pathway mutant nematodes.[1] 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.[2]

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).

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