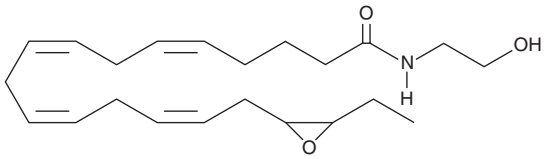
PRODUCT INFORMATION

(±)17(18)-EpETE-Ethanolamide

Item No. 25920

CAS Registry No.:	2123491-23-4
Formal Name:	16-(3-ethyl-2-oxiranyl)-N-(2-hydroxyethyl)-5Z,8Z,11Z,14Z-hexadecatetraenamide
Synonyms:	17,18-EEQ-EA, (±)17,18-EEQ-Ethanolamide, (±)17(18)-EpETE-EA, 17,18-epoxy-Eicosatetraenoic Acid Ethanolamide
MF:	$C_{22}H_{35}NO_3$
FW:	361.5
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

(±)17(18)-EpETE-Ethanolamide 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 (±)17(18)-EpETE-ethanolamide in these solvents is approximately 25 and 30 mg/ml, respectively.

Description

(±)17(18)-EpETE-Ethanolamide is an ω-3 endocannabinoid epoxide.[1] It is formed from the endocannabinoid eicosapentaenoic ethanolamide (EPEA) *via* cytochrome P450 (CYP) epoxygenases and hydrolyzed by soluble epoxide hydrolase (sEH) and fatty acid amide hydrolase (FAAH). It is endogenously produced in LPS-stimulated BV-2 microglia cells and in BV-2 microglia cells supplemented with EPEA, an effect that can be reduced by the CYP inhibitor ketoconazole. (±)17(18)-EpETE-ethanolamide decreases IL-6 and nitrite production induced by LPS in BV-2 microglia and increases the production of IL-10. It inhibits platelet aggregation induced by arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) when used at a concentration of 50 µM but not aggregation induced by ADP (Item Nos. 16778 | 21121), collagen, or ristocetin. It also induces relaxation of preconstricted bovine coronary arteries (ED_{50} = 1.1 µM) and inhibits VEGF-stimulated tubulogenesis in human microvascular endothelial cells (HMVECs). (±)17(18)-EpETE-ethanolamide is the predominant EPEA metabolite found in rat brain, and it has also been found in rat heart, kidney, spleen, and liver, as well as in pig brain. It activates cannabinoid receptor 1 (CB_1) and CB_2 with EC_{50} values of 18.5 and 1.4 nM, respectively, in a β-arrestin recruitment assay.

Reference

1. McDougle, D.R., Watson, J.E., Abdeen, A.A., *et al.* Anti-inflammatory ω-3 endocannabinoid epoxides. *Proc. Natl. Acad. Sci. U.S.A.* **114(30)**, E6034-E6043 (2017).

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