

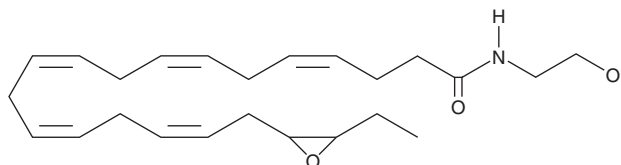
PRODUCT INFORMATION



(±)19(20)-EDP Ethanolamide

Item No. 25917

CAS Registry No.: 2123485-34-5
Formal Name: 18-(3-ethyl-2-oxiranyl)-N-(2-hydroxyethyl)-4Z,7Z,10Z,13Z,16Z-octadecapentaenamide
Synonyms: 19,20-DHEA epoxide, 19,20-epoxy Docosapentaenoic Acid Ethanolamide, 19,20-EDP-EA, 19,20-EDP epoxide
MF: C₂₄H₃₇NO₃
FW: 387.6
Purity: ≥98%
Supplied as: A 100 µg/ml solution in ethanol
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

(±)19(20)-EDP 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 (±)19(20)-EDP ethanolamide in these solvents is approximately 50 mg/ml.

(±)19(20)-EDP ethanolamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of (±)19(20)-EDP ethanolamide should be diluted with the aqueous buffer of choice. (±)19(20)-EDP ethanolamide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method.

Description

(±)19(20)-EDP ethanolamide is an ω-3 endocannabinoid epoxide and cannabinoid (CB) receptor agonist (EC₅₀s = 108 and 280 nM for CB₁ and CB₂, respectively). It is produced through direct epoxidation of docosahexaenoyl ethanolamide (DHEA; Item No. 10007534) by cytochrome P450 (CYP) epoxidases.^{1,2} (±)19(20)-EDP ethanolamide (25 µM) reduces the viability of 143B metastatic osteosarcoma cells.² It decreases the production of IL-6 and increases the production of IL-10 when used at concentrations ranging from 2.5 to 10 µM in BV-2 microglia stimulated by LPS and decreases LPS-induced cytotoxicity when used at concentrations ranging from 5 to 10 µM. It also decreases nitrite production when used at a concentration of 7.5 µM, an effect that can be partially reversed by the CB₂ receptor antagonist AM630 (Item No. 10006974) and the PPARγ antagonist GW 9662 (Item No. 70785). (±)19(20)-EDP ethanolamide induces vasodilation of isolated preconstricted bovine coronary arteries (ED₅₀ = 1.9 µM) and reduces tube formation by human microvascular endothelial cells (HMVECs) in a Matrigel™ assay.

References

- 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).
- Roy, J., Watson, J.E., Hong, I.S., *et al.* Antitumorigenic properties of omega-3 endocannabinoid epoxides. *J. Med. Chem.* **61**(13), 5569-5579 (2018).

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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