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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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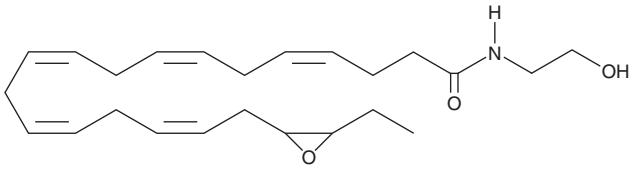
PRODUCT INFORMATION

(±)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: $C_{24}H_{37}NO_3$
FW: 387.6
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

(±)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 (EC_{50}s = 108 and 280 nM for CB_1 and CB_2, respectively). It is produced through direct epoxygenation of docosahexaenoyl ethanolamide (DHEA; Item No. 10007534) by cytochrome P450 (CYP) epoxygenases.[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 CB_2 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 (ED_{50} = 1.9 µM) and reduces tube formation by human microvascular endothelial cells (HMVECs) in a Matrigel™ assay.

References

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).
2. 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).

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