

PRODUCT INFORMATION



(±)4(5)-EpDPA methyl ester

Item No. 90314

CAS Registry No.: 121818-29-9

Formal Name: *rel*-(4R,5S)-epoxy-7Z,10Z,13Z,16Z,19Z-docosapentaenoic acid, methyl ester

Synonyms: (±)4,5-EDP methyl ester, (±) 4,5-epoxy Docosapentaenoic Acid methyl ester, (±)4,5-epoxy DPA methyl ester, (±) 4(5)-EpDPE methyl ester

MF: $C_{23}H_{34}O_3$

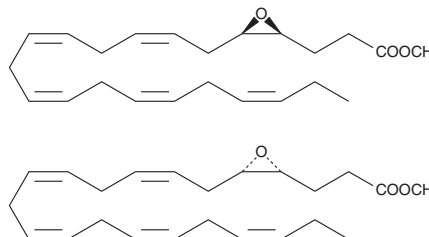
FW: 358.5

Purity: ≥98%

Supplied as: A solution in ethanol

Storage: -80°C

Stability: ≥6 months



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

Laboratory Procedures

(±) 4(5)-EpDPA methyl ester is supplied as a solution in ethanol. Due to the instability of the free acid, (±)4(5)-EpDPA is supplied as the methyl ester. Before performing biological experiments, (±)4(5)-EpDPA methyl ester should be hydrolyzed to (±)4(5)-EpDPA by alkaline hydrolysis.

Prepare a hydrolysis solution consisting of degassed acetone (8 ml) and 0.25 M NaOH (2 ml). Cool the solution to 0°C. Evaporate the ethanolic solution of (±)4(5)-EpDPA methyl ester just to dryness under a stream of inert gas. Immediately add 4 ml of the hydrolysis solution per 1 mg of (±)4(5)-EpDPA methyl ester (e.g., 400 µl per 100 µg vial). Allow the reaction to stand under an inert atmosphere at 22°C for 40 minutes. The resulting concentrated basic solution of (±)4(5)-EpDPA will be stable for about 60 minutes at room temperature or for 12 hours at 0°C. Dilutions of this (±)4(5)-EpDPA stock solution can be made directly into aqueous buffers. Store the aqueous dilutions of (±)4(5)-EpDPA on ice and use within 12 hours.

Description

(±)4(5)-EpDPA methyl ester is a derivative of (±)4(5)-EpDPA which is stable enough to ship and handle routinely. The active free acid can be regenerated from the methyl ester by careful base hydrolysis. (±)4(5)-EpDPA is a CYP450 metabolite of DHA which can be further metabolized to the diol metabolite.¹ There are no published reports on the biological activity of (±)4(5)-EpDPA methyl ester at this time.

Reference

1. Kato, T., Hirukawa, T., Namiki, K. Selective terminal olefin oxidation of n-3 polyunsaturated fatty acids. *Tetrahedron Lett.* **33**(11), 1475-1478 (1992).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 07/07/2025

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM