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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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- Expressversand

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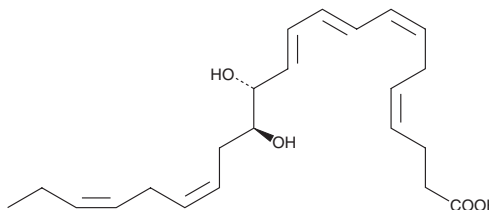
PRODUCT INFORMATION



Maresin 2

Item No. 16369

CAS Registry No.: 1639809-46-3
Formal Name: 13R,14S-dihydroxy-4Z,7Z,9E,11E,16Z,19Z-docosahexaenoic acid
Synonyms: 13R,14S-diHDHA, 13R,14S-dihydroxy Docosahexaenoic Acid, MaR2
MF: C₂₂H₃₂O₄
FW: 360.5
Purity: ≥95%
UV/Vis.: λ_{max}: 273 nm
Supplied as: A solution in ethanol
Storage: -80°C
Stability: ≥1 year



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

Laboratory Procedures

Maresin 2 (MaR2) 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. MaR2 is soluble in ethanol at a concentration of approximately 50 mg/ml. Maresins can isomerize and degrade when put into freeze thaw conditions and/or in solvents such as DMF or DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of MaR2 is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of MaR2 in PBS, pH 7.2, is approximately 0.05 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Docosahexaenoic acid (DHA; Item No. 90310) is an ω-3 fatty acid that is abundant in the brain and the retina and is known to be important in early development.^{1,2} MaR2 is a 13R,14S-dihydroxy DHA formed by recombinant human macrophage 12-lipoxygenase and soluble epoxide hydrolase co-incubated with DHA.³ At 1 ng/mouse, MaR2 was shown to reduce neutrophil infiltration by 40% in a mouse model of peritonitis, and at 10 pM, MaR2 can enhance human macrophage phagocytosis of zymosan A by 90%.³ Analytical and biological comparisons of synthetic MaR2 with endogenously derived MaR2 have confirmed its identity as matching the natural product.⁴

References

1. Su, H.-M. Mechanisms of n-3 fatty acid-mediated development and maintenance of learning memory performance. *J. Nutr. Biochem.* **21**, 364-373 (2010).
2. Wu, T.-C. and Chen, P.-H. Health consequences of nutrition in childhood and early infancy. *Pediatr. Neonatol.* **50(4)**, 135-142 (2009).
3. Deng, B., Wang, C.-W., Arnardottir, H.H., et al. Maresin biosynthesis and identification of maresin 2, a new anti-inflammatory and pro-resolving mediator from human macrophages. *PLoS One* **9(7)**, (2014).
4. Serhan, C. Personal Communication.

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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