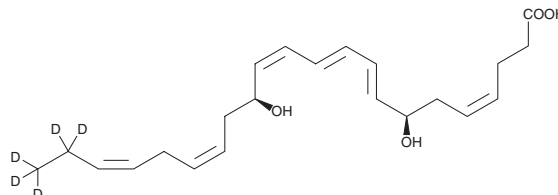


PRODUCT INFORMATION



Maresin 1-d₅ Item No. 21823

Formal Name:	7R,14S-dihydroxy-4Z,8E,10E,12Z,16Z,19Z-docosahexaenoic-21,21,22,22,22-d ₅ acid
Synonyms:	7(R)-MaR1-d ₅ , 7(R)-Maresin 1-d ₅
MF:	C ₂₂ H ₂₇ D ₅ O ₄
FW:	365.5
Chemical Purity:	≥98% (Maresin 1)
Deuterium Incorporation:	≥99% deuterated forms (d ₁ -d ₅); ≤1% d ₀
UV/Vis.:	λ _{max} : 272 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 1-d₅ is intended for use as an internal standard for the quantification of maresin 1 (Item No. 10878) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Maresin 1-d₅ 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 ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of maresin 1-d₅ in these solvents is approximately 50 mg/ml.

Description

Maresin 1 is a member of the specialized pro-resolving mediator (SPM) family of bioactive lipids.¹ It is produced from docosahexaenoic acid (DHA; Item Nos. 90310 | 17950) in human peripheral blood mononuclear cells (PBMCs). Maresin 1 (100 nM) reduces TNF-α-induced increases in reactive oxygen species (ROS) in primary human vascular smooth muscle and endothelial cells.² It decreases disease severity, neutrophil infiltration, and intestinal crypt damage in a mouse model of colitis induced by dextran sulfate (DSS; Item No. 23250) when administered at doses of 0.3 and 1 μg/animal.³ Maresin 1 (0.1, 1, and 10 ng/animal) inhibits increases in inflammatory exudate polymorphonuclear (PMN) neutrophil infiltration in a mouse model of peritonitis induced by zymosan A (Item No. 21175).¹ It has been found in the synovial fluid of rheumatoid arthritis patients.⁴

References

1. Serhan, C.N., Dalli, J., Karamnov, S., *et al.* *FASEB J.* **26(4)**, 1755-1765 (2012).
2. Chetterjee, A., Sharma, A., Chen, M., *et al.* *PLoS One* **9(11)**, 1-11 (2014).
3. Marcon, R., Bento, A.F., Dutra, R.C., *et al.* *J. Immunol.* **191(8)**, 4288-4298 (2013).
4. Giera, M., Ioan-Facsinay, A., Toes, R., *et al.* *Biochim. Biophys. Acta.* **1821(11)**, 1415-1424 (2012).

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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