

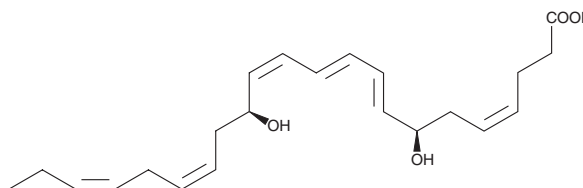
# PRODUCT INFORMATION



## Maresin 1

Item No. 10878

**CAS Registry No.:** 1268720-28-0  
**Formal Name:** 7R,14S-dihydroxy-4Z,8E,10E,12Z,16Z,19Z-docosahexaenoic acid  
**Synonyms:** 7(R)-MaR1, 7(R)-Maresin 1  
**MF:** C<sub>22</sub>H<sub>32</sub>O<sub>4</sub>  
**FW:** 360.5  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 271 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 (7(R)-MaR1) 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 purged with an inert gas can be used. The solubility of 7(R)-MaR1 in ethanol is 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 7(R)-MaR1 is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 7(R)-MaR1 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

Maresin 1 is a member of the specialized pro-resolving mediator (SPM) family of bioactive lipids.<sup>1</sup> 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.<sup>2</sup> 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.<sup>3</sup> 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).<sup>1</sup> It has been found in the synovial fluid of rheumatoid arthritis patients.<sup>4</sup>

### 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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#### 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