

# PRODUCT INFORMATION



## 17(R)-Resolvin D1

Item No. 13060

**CAS Registry No.:** 528583-91-7  
**Formal Name:** 7S,8R,17R-trihydroxy-4Z,9E,11E,13Z,15E,19Z-docosahexaenoic acid

**Synonyms:** Aspirin-triggered Resolvin D1, AT-RvD1, 17-*epi*-Resolvin D1, 17(R)-RvD1

**MF:** C<sub>22</sub>H<sub>32</sub>O<sub>5</sub>

**FW:** 376.5

**Purity:** ≥95%

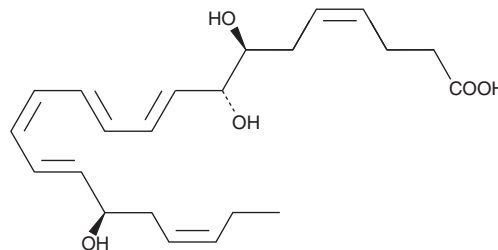
**UV/Vis.:** λ<sub>max</sub>: 302 nm

**Supplied as:** A solution in ethanol

**Storage:** -80°C

**Stability:** ≥1 year

**Special Conditions:** Light sensitive



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

### Laboratory Procedures

17(R)-Resolvin D1 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. 17(R)-Resolvin D1 is soluble in the organic solvent dimethyl formamide at a concentration of approximately 50 mg/ml.

17(R)-Resolvin D1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 17(R)-resolvin D1 should be diluted with the aqueous buffer of choice. The solubility of 17(R)-resolvin D1 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

Resolvins are a family of potent lipid mediators derived from both eicosapentaenoic acid (EPA; Item No. 90110) and docosahexaenoic acid (DHA; Item No. 90310).<sup>1</sup> In addition to being anti-inflammatory, resolvins promote the resolution of the inflammatory response back to a non-inflamed state.<sup>2</sup> Resolvin D1 (RvD1; Item No. 10012554) is produced physiologically from the sequential oxygenation of DHA by 15- and 5-lipoxygenase.<sup>1</sup> 17(R)-RvD1 is an aspirin-triggered epimer of RvD1 that reduces human polymorphonuclear leukocyte (PMN) transendothelial migration, the earliest event in acute inflammation, with equipotency to RvD1 (EC<sub>50</sub> = ~30 nM).<sup>3</sup> 17(R)-RvD1 exhibits a dose-dependent reduction in leukocyte infiltration in a mouse model of peritonitis with maximal inhibition of ~35% at a 100 ng dose.<sup>3</sup> In contrast to RvD1, the aspirin-triggered form resists rapid inactivation by eicosanoid oxidoreductases.

### References

1. Hong, S., Gronert, K., Devchand, P.R., *et al.* Novel docosatrienes and 17S-resolvins generated from docosahexaenoic acid in murine brain, human blood, and glial cells. Autacoids in anti-inflammation. *J. Biol. Chem.* **278**(17), 14677-14687 (2003).
2. Ariel, A. and Serhan, C.N. Resolvins and protectins in the termination program of acute inflammation. *Trends Immunol.* **28**(4), 176-183 (2007).
3. Sun, Y.P., Oh, S.F., Uddin, J., *et al.* Resolvin D1 and its aspirin-triggered 17R epimer stereochemical assignments, anti-inflammatory properties, and enzymatic inactivation. *J. Biol. Chem.* **282**(13), 9323-9334 (2007).

#### 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, 08/24/2022

#### 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