

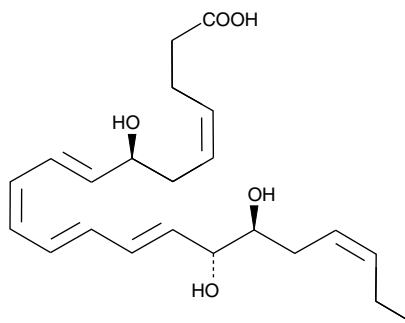
# Product Information



## Resolvin D2

Item No. 10007279

**CAS Registry No.:** 810668-37-2  
**Formal Name:** 7S,16R,17S-trihydroxy-4Z,8E,10Z,12E,14E,19Z-docosahexaenoic acid  
**Synonyms:** 7(S),16(R),17(S)-Resolvin D2, RvD2  
**MF:** C<sub>22</sub>H<sub>32</sub>O<sub>5</sub>  
**FW:** 376.5  
**Purity:** ≥95%  
**Stability:** ≥1 year at -80°C  
**Supplied as:** A solution in ethanol  
**UV/Vis.:** λ<sub>max</sub>: 289, 302, 317 nm  
**Miscellaneous:** Light Sensitive



### Laboratory Procedures

For long term storage, we suggest that resolvin D2 (RvD2) be stored as supplied at -80°C. It should be stable for at least one year.

RvD2 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. It is recommended that this product be stored and handled in an ethanol solution. Lipoxins can isomerize and degrade when put into freeze thaw conditions and/or in solvents such as DMF or DMSO. If diluted with an aqueous buffer, this product should be discarded immediately after use.

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 RvD2 is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of RvD2 in PBS, pH 7.2, is approximately 0.05 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Resolvins are a family of potent lipid mediators derived from both eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).<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> RvD2 is produced physiologically from the sequential oxygenation of DHA by 15- and 5-lipoxygenase and functions to dampen excessive neutrophil trafficking to sites of inflammation.<sup>3</sup> It reduces zymosan-stimulated PMN infiltration by 70% at doses as low as 10 pg per mouse and significantly reduces PAF-stimulated leukocyte adherence and emigration at 1 nM.<sup>3</sup> Also, by stimulating nitric oxide production, RvD2 dose dependently decreases leukocyte-endothelial interactions. In a murine model of sepsis, RvD2 reduces leukocyte and PMN infiltration, decreases production of pro-inflammatory cytokines, and promotes phagocyte-mediated bacterial clearance.<sup>3</sup>

### 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. Spite, M., Norling, L.V., Summers, L., *et al.* Resolvin D2 is a potent regulator of leukocytes and controls microbial sepsis. *Nature* **461**(7268), 1287-1291 (2009).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/10007279](http://www.caymanchem.com/catalog/10007279)

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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