

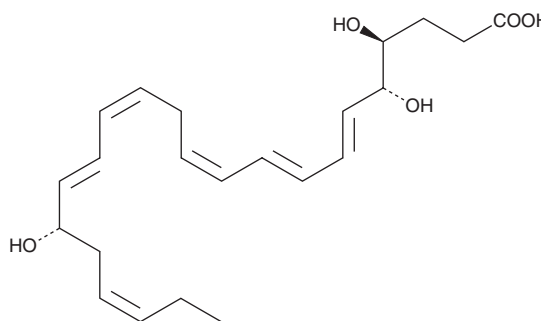
# PRODUCT INFORMATION



## Resolvin D4

Item No. 13835

**CAS Registry No.:** 1025684-60-9  
**Formal Name:** (4S,5R,6E,8E,10Z,13Z,15E,17S,19Z)-4,5,17-trihydroxy-6,8,10,13,15,19-docosahexaenoic acid  
**Synonym:** RvD4  
**MF:** C<sub>22</sub>H<sub>32</sub>O<sub>5</sub>  
**FW:** 376.5  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 227, 277 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

Resolvin D4 (RvD4) 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. Resolvins can isomerize and degrade when put into freeze thaw conditions and/or in solvents such as dimethyl formamide 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 RvD4 is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of RvD4 in PBS, pH 7.2, is approximately 0.5 mg/ml. Aqueous solutions of RvD4 should be discarded immediately after use.

### Description

RvD4 is a specialized pro-resolving mediator derived from docosahexaenoic acid (Item No. 90310).<sup>1</sup> It has been detected in human milk, in the dorsal pouch of mice before and after infection with *S. aureus*, and in untreated tissues from humans, mice, and sardines.<sup>2,3</sup> RvD4, at 10 ng/mouse, reduces neutrophil infiltration in zymosan A-induced peritonitis and, at 200 ng/mouse, diminishes neutrophil infiltration in response to *S. aureus* infection.<sup>3</sup> With isolated cells, RvD4 promotes phagocytosis of bacteria, opsonized zymosan A, and apoptotic neutrophils by human macrophages.<sup>3</sup> It also promotes the clearance of apoptotic neutrophils by human fibroblasts.<sup>3</sup>

### References

1. Serhan, C.N. and Savill, J. Resolution of inflammation: The beginning programs the end. *Nat. Immunol.* **6**(12), 1191-1197 (2005).
2. Arnardottir, H. Orr, S. K., Dalli, J. *et al.* Human milk proresolving mediators stimulate resolution of acute inflammation. *Mucosal. Immunol.* **9**(3), 757-766 (2016).
3. Winkler, J.W., Orr, S.K., Dalli, J., *et al.* Resolvin D4 stereoassignment and its novel actions in host protection and bacterial clearance. *Sci. Rep.* **6**, (2016).

#### 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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