

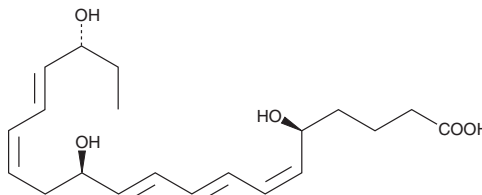
# PRODUCT INFORMATION



## Resolvin E1

Item No. 10007848

**CAS Registry No.:** 552830-51-0  
**Formal Name:** 5S,12R,18R-trihydroxy-6Z,8E,10E,14Z,16E-eicosapentaenoic acid  
**Synonym:** RvE1, 5S,12R,18R-trihydroxy-EPA, 5S,12R,18R-trihydroxy-6Z,8E,10E,14Z,16E-EPA, 5,12,18R-triHEPE  
**MF:** C<sub>20</sub>H<sub>30</sub>O<sub>5</sub>  
**FW:** 350.5  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 272 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

Resolvin E1 (RvE1) 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 RvE1 is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of RvE1 in PBS, pH 7.2, is approximately 0.05 mg/ml. Aqueous solutions of RvE1 should be discarded immediately after use.

### Description

RvE1 is a member of the specialized pro-resolving mediator (SPM) family of bioactive lipids.<sup>1</sup> It is produced from eicosapentaenoic acid (EPA; Item No. 90110 | 90110.1 | 21908) via an 18-HEPE epoxide intermediate, which is formed by aspirin-acetylated COX-2-mediated oxidation of EPA and 5-lipoxygenase (5-LO), by leukotriene A<sub>4</sub> (LTA<sub>4</sub>) hydrolase in human polymorphonuclear (PMN) neutrophils. RvE1 activates chemokine-like receptor 1 (CMKLR1; EC<sub>50</sub> = 0.137 nM in a reporter assay). RvE1 (20 ng/animal) inhibits increases in inflammatory exudate neutrophil infiltration in a mouse model of peritonitis induced by zymosan A (Item No. 21175). It increases survival and prevents decreases in colon length in a mouse model of TNBS-induced colitis when administered at a dose of 50 µg/kg.<sup>2</sup> RvE1 (50 µg/kg) inhibits ovalbumin-induced increases in eosinophil and total cell numbers, as well as IL-13 and IgE levels in bronchoalveolar lavage fluid (BALF) in an ovalbumin-sensitized mouse model of asthma.<sup>3</sup>

### References

1. Oh, S.F., Pillai, P.S., Recchiuti, A., et al. *J. Clin. Invest.* **121**(2), 569-581 (2011).
2. Arita, M., Yoshida, M., Hong, S., et al. *Proc. Nat. Acad. Sci. USA* **102**(21), 7671-7676 (2005).
3. Aoki, H., Hisada, T., Ishizuka, T., et al. *Biochem. Biophys. Res. Commun.* **367**(2), 509-515 (2008).

#### 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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