

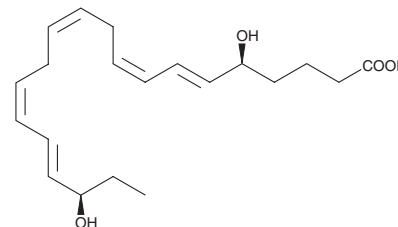
PRODUCT INFORMATION



Resolvin E2

Item No. 13827

CAS Registry No.: 865532-70-3
Formal Name: 5S,18R-dihydroxy-6E,8Z,11Z,14Z,16E-eicosapentaenoic acid
Synonym: RvE2
MF: C₂₀H₃₀O₄
FW: 334.5
Purity: ≥95%
UV/Vis.: λ_{max}: 237 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 E2 (RvE2) 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.

Description

RvE2 is a member of the specialized pro-resolving mediator (SPM) family of bioactive lipids.² It is produced from eicosapentaenoic acid (EPA; Item Nos. 90110 | 90110.1 | 21908) via an 18-HEPE intermediate, which is formed by aspirin-acetylated COX-2-mediated oxidation of EPA, by 5-lipoxygenase (5-LO) in human polymorphonuclear (PMN) neutrophils.^{1,3} RvE2 (20 ng/animal) inhibits increases in inflammatory exudate neutrophil infiltration in a mouse model of peritonitis induced by zymosan A (Item No. 21175).³ Hepatic RvE2 levels are increased in mice fed normal chow, as well as in a mouse model of high-fat diet-induced non-alcoholic fatty liver disease (NAFLD), by dietary supplementation with EPA.⁴ Plasma levels of RvE2 are increased by dietary supplementation with fish oil containing ω-3 polyunsaturated fatty acids (PUFAs) in patients with peripheral artery disease or chronic kidney disease.^{2,5,6}

References

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2. Chiang, N. and Serhan, C.N Specialized pro-resolving mediator network: An update on production and actions. *Essays Biochem.* **64(3)**, 443-462 (2020).
3. Sungwhan, F.O., Pillai, P.S., Recchiuti, A., *et al.* Pro-resolving actions and stereoselective biosynthesis of 18S E-series resolvins in human leukocytes and murine inflammation. *J. Clin. Invest.* **121(2)**, 569-581 (2021).
4. Echeverría, F., Valenzuela, R., Espinosa, A., *et al.* Reduction of high-fat diet-induced liver proinflammatory state by eicosapentaenoic acid plus hydroxytyrosol supplementation: Involvement of resolvins RvE1/2 and RvD1/2. *J. Nutr. Biochem.* **63**, 35-43 (2018).
5. Ramirez, J.L., Gasper, W.J., Khetani, S.A., *et al.* Fish oil increases specialized pro-resolving lipid mediators in PAD (the OMEGA-PAD II trial). *J. Surg. Res.* **238**, 164-174 (2019).
6. Barden, A.E., Shinde, S., Burke, V., *et al.* The effect of n-3 fatty acids and coenzyme Q10 supplementation on neutrophil leukotrienes, mediators of inflammation resolution and myeloperoxidase in chronic kidney disease. *Prostaglandins Other Lipid Mediat.* **136**, 1-8 (2018).

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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