

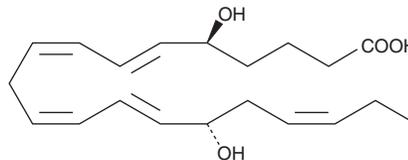
PRODUCT INFORMATION



Resolvin E4

Item No. 29590

CAS Registry No.: 1781227-87-9
Formal Name: 5S,15S-dihydroxy-6E,8Z,11Z,13E,17Z-eicosapentaenoic acid
Synonym: RvE4
MF: C₂₀H₃₀O₄
FW: 334.5
Purity: ≥95%
UV/Vis.: λ_{max}: 245 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 E4 (RvE4) 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. Solvents such as dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of RvE4 in DMF is approximately 50 mg/ml.

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 RvE4 is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of RvE4 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

RvE4 is a member of the specialized pro-resolving mediator (SPM) family of bioactive lipids.¹ It is produced from eicosapentaenoic acid (EPA; Item Nos. 90110 | 90110.1 | 21908) by 15-lipoxygenase (15-LO) via 15(S)-HpEPE (Item No. 42710) and 15S-hydroxy, 5S-HpEPE intermediates *in vitro* and by isolated human M2 macrophages or polymorphonuclear (PMN) neutrophils under normoxic or hypoxic conditions. RvE4 synthesis is enhanced in M2 macrophage and neutrophil co-cultures, indicating transcellular biosynthesis by a potential 15-LO and 5-LO mechanism. It has been found in mouse inflammatory exudates. RvE4 (10 nM) increases efferocytosis of apoptotic neutrophils or senescent red blood cells (sRBCs) by human M2 macrophages under hypoxic conditions *in vitro*. Intraperitoneal administration of RvE4 (100 ng/animal) inhibits increases in inflammatory exudate neutrophil infiltration in a mouse model of hemorrhagic peritonitis induced by zymosan A (Item No. 21175) and thrombin. It also increases inflammatory exudate macrophage infiltration and efferocytosis of apoptotic neutrophils and/or RBCs in the same model.

Reference

1. Norris, P.C., Libreros, S., and Serhan, C.N. Resolution metabolomes activated by hypoxic environment. *Sci. Adv.* **5(10)**, eaax4895 (2019).

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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