

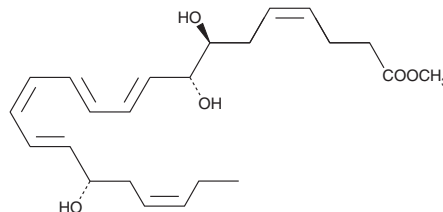
PRODUCT INFORMATION



Resolvin D1 methyl ester

Item No. 9001815

CAS Registry No.: 937738-63-1
Formal Name: 7S,8R,17S-trihydroxy-4Z,9E,11E,13Z,15E,19Z-docosahexaenoic acid, methyl ester
Synonyms: 17(S)-Resolvin D1 methyl ester, RvD1 methyl ester
MF: C₂₃H₃₄O₅
FW: 390.5
Purity: ≥97%
UV/Vis.: λ_{max}: 302 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

RvD1 Methyl ester 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 RvD1 methyl ester is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of RvD1 methyl ester in PBS, pH 7.2, is approximately 0.05 mg/ml. We do not recommend storing the aqueous solution for more than one day. Aqueous solutions of RvD1 methyl ester should be discarded immediately after use.

Description

RvD1 (Item No. 10012554) is produced physiologically from the sequential oxygenation of docosahexaenoic acid (Item No. 90310) by 15- and 5-lipoxygenase (Item No. 60402).¹ It reduces human polymorphonuclear leukocyte transendothelial migration, the earliest event in acute inflammation, with an EC₅₀ value of ~30 nM.² RvD1 methyl ester is a methyl ester version of the free acid that may act as a lipophilic prodrug form that will alter its distribution and pharmacokinetic properties. The methyl ester moiety is susceptible to cleavage by intracellular esterases, leaving the free acid.

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. Sun, Y.-P., Oh, S.F., Uddin, J., *et al.* Resolvin D1 and its aspirin-triggered 17R epimer stereochemical assignments, anti-inflammatory properties, and enzymatic inactivation. *J. Biol. Chem.* **282**(13), 9323-9334 (2007).

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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