

# Produktinformation



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# SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic in



# 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

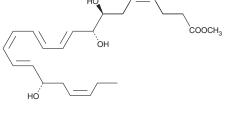
MF:  $C_{23}H_{34}O_{5}$ FW: 390.5 **Purity:** ≥97%

UV/Vis.:  $\lambda_{max}$ : 302 nm

Supplied as: A solution in ethanol

-80°C Storage: 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). It reduces human polymorphonuclear leukocyte transendothelial migration, the earliest event in acute inflammation, with an  $EC_{50}$  value of ~30 nM.<sup>2</sup> 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.

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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#### **CAYMAN CHEMICAL**

1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.**CAYMANCHEM**.COM