



# SZABO SCANDIC

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## Produktinformation



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# PRODUCT INFORMATION



## 11R(12S)-EET

Item No. 9004344

**CAS Registry No.:** 123931-38-4  
**Formal Name:** 10-[(2R,3S)-3-(2Z)-2-octen-1-yl-2-oxiranyl]-5Z,8Z-decadienoic acid

**Synonyms:** 11R(12S)-EpETRE,  
11R(12S)-Epoxy-all-cis-5,8,14-Eicosatrienoic Acid,  
11R(12S)-Epoxyeicosatrienoic Acid,  
11R(12S)-Epoxy-5(Z),8(Z),14(Z)-ETRE, FA 20:4;O

**MF:** C<sub>20</sub>H<sub>32</sub>O<sub>3</sub>

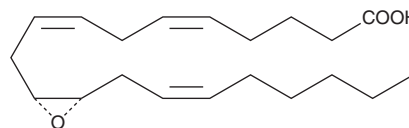
**FW:** 320.5

**Purity:** ≥95%

**Supplied as:** A solution in ethanol

**Storage:** -20°C

**Stability:** ≥1 year



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

11R(12S)-EET 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. 11R(12S)-EET is sparingly soluble (1-10 mg/ml) in acetonitrile, which should be purged with an inert gas.

### Description

11R(12S)-EET is an oxylipin and a metabolite of arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607).<sup>1,2</sup> It is selectively formed from arachidonic acid by the cytochrome P450 (CYP) isoform CYP2C23 and CYP2C24 over CYP2B2, as well as CYP2C8 over CYP2C9. 11R(12S)-EET (50 nM) activates large-conductance calcium-activated potassium channels (K<sub>Ca</sub>1.1/BK) in isolated rat coronary small arterial smooth muscle cells and binds to isolated guinea pig monocytes in a competitive binding assay using [<sup>3</sup>H]14(15)-EET (K<sub>i</sub> = 595.1 nM).<sup>3,4</sup> It inhibits the epithelial sodium channel (ENaC) in a patch-clamp assay using isolated rat cortical collecting duct tubules when used at a concentration of 100 nM.<sup>5</sup> 11R(12S)-EET induces dilation of precontracted isolated canine epicardial arterioles (EC<sub>50</sub> = 6.3 pM) and denuded porcine subepicardial arterioles (EC<sub>50</sub> = 1.6 pM).<sup>3</sup> It induces migration of human umbilical vein endothelial cells (HUVECs) when used at a concentration of 5 μM.<sup>6</sup>

### References

1. Capdevila, J.H., Falck, J.R., and Harris, R.C. Cytochrome P450 and arachidonic acid bioactivation: Molecular and functional properties of the arachidonate monooxygenase. *J. Lipid Res.* **41(2)**, 163-181 (2000).
2. Daikh, B.E., Lasker, J.M., Raucy, J.L., et al. Regio- and stereoselective epoxidation of arachidonic acid by human cytochromes P450 2C8 and 2C91. *J. Pharmacol. Exp. Ther.* **271(3)**, 1427-1433 (1994).
3. Zhang, Y., Oltman, C.L., Lu, T., et al. EET homologs potently dilate coronary microvessels and activate BKCa channels. *Am. J. Physiol. Heart Circ. Physiol.* **280(6)**, H2430-H2440 (2001).
4. Wong, P.Y.-K., Lai, P.-S., and Falck, J.R. Mechanism and signal transduction of 14 (R), 15 (S)-epoxyeicosatrienoic acid (14,15-EET) binding in guinea pig monocytes. *Prostaglandins Other Lipid Mediat.* **62(4)**, 321-333 (2000).
5. Sun, P., Lin, D.H., Yue, P., et al. High potassium intake enhances the inhibitory effect of 11,12-EET on ENaC. *J. Am. Soc. Nephrol.* **21(10)**, 1667-1677 (2010).
6. Ding, Y., Frömel, T., Popp, R., et al. The biological actions of 11,12-epoxyeicosatrienoic acid in endothelial cells are specific to the R/S-enantiomer and require the Gs protein. *J. Pharmacol. Exp. Ther.* **350(1)**, 14-21 (2014).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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