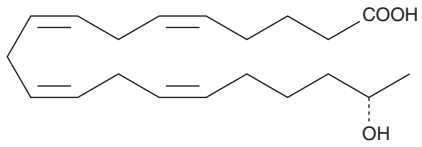
PRODUCT INFORMATION

19(S)-HETE

Item No. 10007766

CAS Registry No.:	115461-40-0
Formal Name:	19S-hydroxy-5Z,8Z,11Z,14Z-eicosatetraenoic acid
Synonym:	19(S)-Hydroxyeicosatetraenoic Acid
MF:	$C_{20}H_{32}O_3$
FW:	320.5
Purity:	≥98%
Supplied as:	A solution in ethanol
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

19(S)-HETE 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 DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 19(S)-HETE in these solvents is approximately 20 mg/ml.

19(S)-HETE is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 19(S)-HETE should be diluted with the aqueous buffer of choice. The solubility of 19(S)-HETE in PBS (pH 7.2) is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

19-HETE is one of the major cytochrome P450 (CYP450) metabolites of arachidonic acid that is released from the kidney in response to angiotensin II. When formed by the CYP2E1 isoform, 19-HETE is composed of 70% and 30% of the (S) and (R) stereoisomers, respectively.[1] Both 19(S)- and 19(R)-HETE are potent vasodilators of renal preglomerular vessels.[2] 19(S)-HETE stimulates both renal sodium-potassium ATPase and volume absorption in the rabbit proximal straight tubule.[3,4]

References

1. Laethem, R.M., Balazy, M., Falck, J.R., *et al.* Formation of 19(S)-, 19(R)-, and 18(R)-hydroxyeicosatetraenoic acids by alcohol-inducible cytochrome P450 2E1. *J. Biol. Chem.* **268(17)**, 12912-12918 (1993).
2. Carroll, M.A., Balazy, M., Margiotta, P., *et al.* Cytochrome P-450-dependent HETEs: Profile of biological activity and stimulation by vasoactive peptides. *Am. J. Physiol.* **271(4 Pt 2)**, R863-R869 (1996).
3. Escalante, B., Falck, J.R., Yadagiri, P., *et al.* 19(S)-Hydroxyeicosatetraenoic acid is a potent simulator of renal Na^+-K^+-ATPase. *Biochem. Biophys. Res. Commun.* **152(3)**, 1269-1274 (1988).
4. Quigley, R., Baum, M., Reddy, K.M., *et al.* Effects of 20-HETE and 19(S)-HETE on rabbit proximal straight tubule volume transport. *Am. J. Physiol. Renal Physiol.* **278(6)**, F949-F953 (2000).

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