

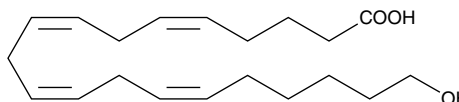
Product Information



20-HETE

Item No. 90030

CAS Registry No.: 79551-86-3
Formal Name: 20-hydroxy-5Z,8Z,11Z,14Z-eicosatetraenoic acid
Synonym: 20-hydroxy Arachidonic Acid
MF: C₂₀H₃₂O₃
FW: 320.5
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol
Misc.: Oxygen and light sensitive



Laboratory Procedures

For long term storage, we suggest that 20-HETE be stored as supplied at -20°C. It should be stable for at least one year.

20-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 ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. 20-HETE is miscible in these solvents.

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 20-HETE is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 20-HETE in PBS (pH 7.2) is at least 0.8 mg/ml. For greater aqueous solubility, 20-HETE can be directly dissolved in 0.1 M Na₂CO₃ (2 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. We do not recommend storing the aqueous solution for more than one day.

20-HETE is a cytochrome P450 (CYP450) metabolite postulated to play an autacoid role in the renal and cerebral vasculature.¹ In rat cerebral microvessels, 20-HETE is a vasoconstrictor that mediates pressure-induced autoregulatory vasoconstriction.² 20-HETE is excreted mainly as the glucuronide conjugate. The concentration of free 20-HETE (20-40 pg/ml in human urine) is about 10-fold lower than the corresponding concentration of the 20-glucuronide.³ 20-hydroxy Arachidonic acid can be further metabolized by cyclooxygenase to 20-hydroxy PGG₂ and 20-hydroxy PGH₂.⁴

References

1. McGiff, J.C. and Quilley, J. 20-HETE and the kidney: Resolution of old problems and new beginnings. *Am. J. Physiol.* **277**, R607-R623 (1999).
2. Gebremedhin, D., Lange, A.R., Lowry, T.F., *et al.* Production of 20-HETE and its role in autoregulation of cerebral blood flow. *Circ. Res.* **87**, 60-65 (2000).
3. Prakash, C., Zhang, J.Y., Falck, J.R., *et al.* 20-Hydroxyeicosatetraenoic acid is excreted as a glucuronide conjugate in human urine. *Biochem. Biophys. Res. Commun.* **185**, 728-733 (1992).
4. Schwartzman, M.L., Falck, J.R., Yadagiri, P., *et al.* Metabolism of 20-hydroxyeicosatetraenoic acid by cyclooxygenase. Formation and identification of novel endothelium-dependent vasoconstrictor metabolites. *J. Biol. Chem.* **264**, 11658-11662 (1989).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/90030

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. 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

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery.**

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy located on our website and in our catalog.**

Copyright Cayman Chemical Company, 10/22/2013

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com