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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

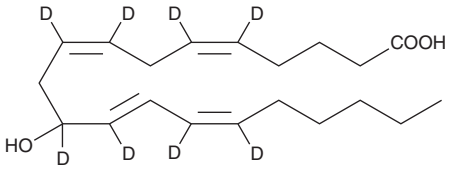
linkedin.com/company/szaboscandic

PRODUCT INFORMATION

(±)11-HETE-d_8

Item No. 9002385

Formal Name:	(±)11-hydroxy-5Z,8Z,12E,14Z-eicosatetraenoic-5,6,8,9,11,12,14,15-d_8 acid
Synonym:	(±)11-Hydroxyeicosatetraenoic Acid-d_8
MF:	$C_{20}H_{24}D_8O_3$
FW:	328.5
Chemical Purity:	≥98% ((±)11-HETE)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_8); ≤1% d_0
UV/Vis.:	λ_{max}: 234 nm
Supplied as:	A solution in acetonitrile
Storage:	-20°C
Stability:	≥1 year



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

Laboratory Procedures

(±)11-HETE-d_8 is intended for use as an internal standard for the quantification of 11-HETE by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

(±)11-HETE-d_8 is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of (±)11-HETE-d_8 in ethanol is approximately 50 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Description

(±)11-HETE is formed non-enzymatically from arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607).[1,2] 11(R)-HETE is formed from arachidonic acid by COX-1, COX-2, and aspirin-acetylated COX-2.[3,4] 11(R)- and 11(S)-HETE are formed from arachidonic acid via cytochrome P450 (CYP), with 11(R)-HETE formed at a higher ratio than 11(S)-HETE.[5]

References

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2. Derogis, P.B.M.C., Chaves-Filho, A.B., and Miyamoto, S. Characterization of hydroxy and hydroperoxy polyunsaturated fatty acids by mass spectrometry. *Bioactive lipids in health and disease*. Trostchansky, A. and Rubbo, H., editors, *Springer* (2019).
3. Thuresson, E.D., Lakkides, K.M., and Smith, W.L. Different catalytically competent arrangements of arachidonic acid within the cyclooxygenase active site of prostaglandin endoperoxide H synthase-1 lead to the formation of different oxygenated products. *J. Biol. Chem.* **275(12)**, 8501-8507 (2000).
4. Xiao, G., Tsai, A.I., Palmer, G., *et al.* Analysis of hydroperoxide-induced tyrosyl radicals and lipoxygenase activity in aspirin-treated human prostaglandin H synthase-2. *Biochemistry* **36(7)**, 1836-1845 (1997).
5. Capdevila, J., Yadagiri, P., Manna, S., *et al.* Absolute configuration of the hydroxyeicosatetraenoic acids (HETEs) formed during catalytic oxygenation of arachidonic acid by microsomal cytochrome P-450. *Biochem. Biophys. Res. Commun.* **141(3)**, 1007-1011 (1986).

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