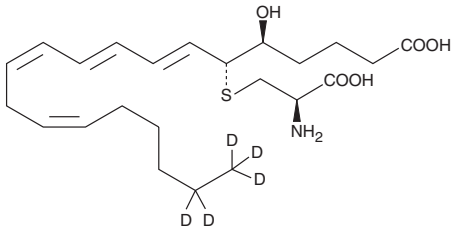
PRODUCT INFORMATION

Leukotriene E_4-d_5 MaxSpec® Standard

Item No. 25299

CAS Registry No.: 1240398-14-4
Formal Name: 5S-hydroxy-6R-(S-cysteinyl)-7E,9E,11Z,14Z-eicosatetraenoic-19,19,20,20,20-d_5 acid
Synonym: LTE_4-d_5
MF: $C_{23}H_{32}D_5NO_5S$
FW: 444.6
Purity: ≥95%



Supplied as: A solution in ethanol; in a deactivated glass ampule
Concentration: 10 µg/ml (nominal); see certificate of analysis for verified concentration
Storage: -80°C
Stability: ≥7 years; *Stability testing is ongoing to ensure concentration accuracy. The certificate of analysis and product expiry date will be updated upon completion of testing.*
Special Conditions: Store upright and unopened at -80°C. Warm to room temperature prior to opening. Light sensitive.

Description

Leukotriene E_4-d_5 (LTE_4-d_5) is intended for use as an internal standard for the quantification of LTE_4 by GC- or LC-mass spectrometry. LTE_4 is produced by the action of dipeptidase on LTD_4, leaving only the cysteinyl group still attached to the fatty acid backbone.[1] It is one of the constituents of slow-reacting substance of anaphylaxis (SRS-A).[2] LTE_4 is considerably less active (8 to 12-fold) than LTC_4 in the biological activities characteristic of cysteinyl leukotrienes.[1,3] Unlike LTC_4 and LTD_4, LTE_4 accumulates in both plasma and urine. Therefore, urinary excretion of LTE_4 is most often used as an indicator of asthma.[4-6] In humans, basal levels of LTE_4 range from 1-100 pg/mg creatinine. In asthmatic patients, urinary LTE_4 levels increase to 80-1,000 pg/mg creatinine.[5]

LTE_4-d_5 MaxSpec® standard is a quantitative grade standard of LTE_4-d_5 (Item No. 10007858) that has been prepared specifically for mass spectrometry or any application where quantitative reproducibility is required. The solution has been prepared gravimetrically and is supplied in a deactivated glass ampule sealed under argon. The concentration was verified by comparison to an independently prepared calibration standard. This LTE_4-d_5 MaxSpec® standard is guaranteed to meet identity, purity, stability, and concentration specifications and is provided with a batch-specific certificate of analysis. Ongoing stability testing is performed to ensure the concentration remains accurate throughout the shelf life of the product. ***Note:*** *The amount of solution added to the vial is in excess of the listed amount. Therefore, it is necessary to accurately measure volumes for preparation of calibration standards. Follow recommended storage and handling conditions to maintain product quality.*

References

1. Bernström, K. and Hammarström, S. *J. Biol. Chem.* **256(18)**, 9579-9582 (1981).
2. Samuelsson, B. *Science* **220(4597)**, 568-575 (1983).
3. Lefer, A.M. *Biochem. Pharmacol.* **35(2)**, 123-127 (1986).
4. Kumlin, M., Stensvad, F., Larsson, L., *et al. Clin. Exp. Allergy* **25(5)**, 467-479 (1995).
5. Drazen, J.M., O'Brien, J., Sparrow, D., *et al. Am. Rev. Respir. Dis.* **146(1)**, 104-108 (1992).
6. Kumlin, M., Dahlén, B., Björck, T., *et al. Am. Rev. Respir. Dis.* **146(1)**, 96-103 (1992).

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