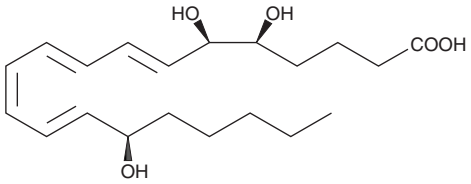
PRODUCT INFORMATION

15(R)-Lipoxin A_4

Item No. 90415

CAS Registry No.: 171030-11-8
Formal Name: 5(S),6(R),15(R)-trihydroxy-7E,9E,11Z,13E-eicosatetraenoic acid
Synonyms: AT-Lipoxin A_4, 15-*epi* Lipoxin A_4, 15(R)-LXA_4
MF: $C_{20}H_{32}O_5$
FW: 352.5
Purity: ≥95%
UV/Vis.: λ_{max}: 302 nm
Supplied as: A solution in ethanol
Storage: -80°C
Stability: ≥1 year



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

Laboratory Procedures

15(R)-Lipoxin A_4 (15(R)-LXA_4) 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 dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of 15(R)-LXA_4 in DMF is approximately 50 mg/ml.

15(R)-LXA_4 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanol solution of 15(R)-LXA_4 should be diluted with the aqueous buffer of choice. The solubility of 15(R)-LXA_4 in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Lipid-derived lipoxins are produced at the site of vascular and mucosal inflammation where they down-regulate polymorphonuclear leukocyte recruitment and function. 15(R)-LXA_4 is derived from the aspirin-triggered formation of 15(R)-HETE (Item No. 34710) from arachidonic acid (Item No. 90010). [1,2] 15(R)-LXA_4 inhibits LTB_4-induced chemotaxis, adherence, and transmigration of neutrophils with twice the potency of LXA_4 (Item No. 90410) demonstrating activity in the nM range.[1,3] The anti-inflammatory effects of aspirin may be ascribed in part to the ability of 15(R)-LXA_4 to regulate leukocyte function.[4] 15(R)-LXA_4 is reported to promote resolution of inflammation in LPS-treated stromal cells derived from intermediate-stage diseased supraspinatus tendons as evidenced by increased expression of the STAT-6 pathway target genes, *ALOX15* and *CD206*.[5]

References

1. Clària, J., Lee, M.H., and Serhan, C.N. *Mol. Med.* **2(5)**, 583-596 (1996).
2. Clària, J. and Serhan, C.N. *Proc. Natl. Acad. Sci. USA* **92(21)**, 9475-9479 (1995).
3. Fierro, I.M., Colgan, S.P., Bernasconi, G., *et al. J. Immunol.* **170(5)**, 2688-2694 (2003).
4. Chiang, N., Bermudez, E.A., Ridker, P.M., *et al. Proc. Natl. Acad. Sci. USA* **101(42)**, 15178-15183 (2004).
5. Dakin, S.G., Martinez, F.O., Yapp, C., *et al. Sci. Transl. Med.* **7(311)**, (2015).

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