

## Lipoxin A4

### Chemical Properties

CAS No. : 89663-86-5

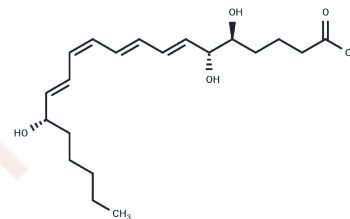
Formula: C<sub>20</sub>H<sub>32</sub>O<sub>5</sub>

Molecular Weight: 352.47

Store at low temperature

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



### Biological Description

Description	Lipoxin A4 (LXA4) is a lipoxygenase-derived arachidonate-like mediator with anti-inflammatory properties. Lipoxin A4 attenuates MSU crystal-induced NLRP3 inflammasome activation through inhibition of Nrf2, and regulates M1/M2 macrophage polarization through the FPR2-IRF pathway. Lipoxin inhibits oxidative stress and inflammation.
Targets(IC50)	Endogenous Metabolite, Interleukin
In vitro	Lipoxin A4 (LXA4; NHEKs) inhibits the expression of IL-6 and IL-8, downregulates the expression of cyclin D1, and suppresses the ERK1/2 phosphorylation and NF-κB-p65 nuclear translocation in NHEKs.[2] Lipoxin A4 (100 nM; preincubation for 30 minutes; NHEKs) inhibits the NHEKs proliferation with or without stimulating by LPS (10 μg/mL).[2] Lipoxin A4 (100 nM; preincubation for 30 minutes) downregulates the LPS-induced secretion and expression of HMGB1 in keratinocytes.[1]

### Solubility Information

Solubility	PBS (pH 7.2): 0.05 mg/mL (0.14 mM), Sonication is recommended. H <sub>2</sub> O: < 1 mg/mL (insoluble or slightly soluble.) Ethanol: 30 mg/mL (85.11 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8371 mL	14.1856 mL	28.3712 mL
5 mM	0.5674 mL	2.8371 mL	5.6742 mL
10 mM	0.2837 mL	1.4186 mL	2.8371 mL
50 mM	0.0567 mL	0.2837 mL	0.5674 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

- Hu F, et al. Lipoxin A4 inhibits proliferation and inflammatory cytokine/chemokine production of human epidermal keratinocytes associated with the ERK1/2 and NF- $\kappa$ B pathways. *J Dermatol Sci*. 2015 Jun;78(3):181-8.
- Bozinovski S, et al. Serum amyloid A opposes lipoxin A<sub>4</sub> to mediate glucocorticoid refractory lung inflammation in chronic obstructive pulmonary disease. *Proc Natl Acad Sci U S A*. 2012 Jan 17;109(3):935-40.
- Liu X, et al. Lipoxin A4 and its analog suppress inflammation by modulating HMGB1 translocation and expression in psoriasis. *Sci Rep*. 2017 Aug 2;7(1):7100.
- Dong W, et al. Expression of lipoxin A4, TNF $\alpha$  and IL-1 $\beta$  in maternal peripheral blood, umbilical cord blood and placenta, and their significance in pre-eclampsia. *Hypertens Pregnancy*. 2014 Nov;33(4):449-56.
- Shimizu S, et al. Pro-resolution mediator lipoxin A4 and its receptor in upper airway inflammation. *Ann Otol Rhinol Laryngol*. 2013 Nov;122(11):683-9.

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