

Maresin 1

Chemical Properties

CAS No. : 1268720-28-0

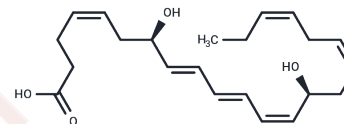
Formula: C₂₂H₃₂O₄

Molecular Weight: 360.49

Store at low temperature

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

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Maresin 1 is a small molecule compound biosynthesized by macrophages (MΦ) with significant anti-inflammatory activity that attenuates LPS-induced lung injury in mice by inhibiting neutrophil adhesion and decreasing the levels of pro-inflammatory cytokines, and stimulates intracellular Ca ²⁺ production and secretion.
Targets(IC50)	Calcium Channel, Reactive Oxygen Species
In vitro	In addition to reducing the production of IL-1β, TNF-α, IL-6, and INF-γ, Maresin 1 (MaR1, 300 nM) also diminishes neutrophil migration and the generation of reactive oxygen species [2].
In vivo	In a dose-dependent manner, Maresin 1 (MaR1) inhibits TRPV1 currents in neurons, blocking capsaicin-induced inward currents (IC ₅₀ =0.49 nM), and alleviates inflammation and chemotherapy-induced neuropathic pain in mice [3]. Maresin 1 (MaR1, 0.1, 0.3, and 1 μg/animal, iv) protects mice from acute DSS-induced colitis. Treatment with Maresin 1 (0.3 and 1 μg/animal, iv) significantly reduces macroscopic damage in the acute phase of DSS-induced colitis [2].

Solubility Information

Solubility	DMF: 50 mg/mL (138.7 mM), Sonication is recommended. PBS (pH 7.2): 0.05 mg/mL (0.14 mM), Sonication is recommended. Ethanol: 40 mg/mL (110.96 mM), Sonication is recommended. DMSO: 40 mg/mL (110.96 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	2.774 mL	13.870 mL	27.740 mL
5 mM	0.5548 mL	2.774 mL	5.548 mL
10 mM	0.2774 mL	1.387 mL	2.774 mL
50 mM	0.0555 mL	0.2774 mL	0.5548 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

- Olsen MV, et al. Maresin 1, a specialized proresolving mediator, stimulates intracellular [Ca²⁺] and secretion in conjunctival goblet cells. *J Cell Physiol.* 2021 Jan;236(1):340-353.
- Rodrigo Marcon, et al. Maresin 1, a Proresolving Lipid Mediator Derived From omega-3 Polyunsaturated Fatty Acids, Exerts Protective Actions in Murine Models of Colitis. *J Immunol.* 2013 Oct 15;191(8):4288-98.
- Serhan CN, et al. Macrophage proresolving mediator maresin 1 stimulates tissue regeneration and controls pain. *FASEB J.* 2012 Apr;26(4):1755-65.
- Serhan, C. . (2007).

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