

## Anti-inflammatory agent 50

## Chemical Properties

CAS No. :

Formula: C40H55N3O6

Molecular Weight: 673.88

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	Anti-inflammatory agent 50 (compound a1), a derivative of Fusidic acid, exerts its effects through inhibition of inflammatory mediators including NO, IL-6, and TNF- $\alpha$ . It mitigates acute lung injury by modulating these mediators and suppressing the MAPK, NF- $\kappa$ B, and NLRP3 inflammasome signaling pathways [1].
Targets(IC50)	NF- $\kappa$ B, COX
In vitro	In LPS-stimulated RAW264.7 cells, Anti-inflammatory agent 50 (compound a1) inhibits inflammatory mediators including nitric oxide (NO) with an IC50 of 3.26 $\mu$ M, interleukin-6 (IL-6) with an IC50 of 1.85 $\mu$ M, and tumor necrosis factor-alpha (TNF- $\alpha$ ) with an IC50 of 3.88 $\mu$ M. Additionally, Anti-inflammatory agent 50 significantly suppresses the expression of certain immunorelated cytotoxic factors, such as cyclooxygenase-2 (COX-2) and inducible nitric oxide synthase (iNOS) [1].
In vivo	Anti-inflammatory agent 50 (compound a1) mitigates pulmonary inflammation and decreases levels of NO, IL-6, TNF- $\alpha$ , COX-2, and iNOS in mice with LPS-induced acute lung injury (ALI). It accomplishes this by attenuating the phosphorylation of p38 MAPK, c-JNK, and ERK, thereby inhibiting the MAPK signaling pathway. Additionally, Anti-inflammatory agent 50 inhibits the NF- $\kappa$ B signaling pathway by preventing the phosphorylation of I $\kappa$ B $\alpha$ [1].

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.4839 mL	7.4197 mL	14.8394 mL
5 mM	0.2968 mL	1.4839 mL	2.9679 mL
10 mM	0.1484 mL	0.742 mL	1.4839 mL
50 mM	0.0297 mL	0.1484 mL	0.2968 mL

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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.

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