

Alliin

Chemical Properties

CAS No. : 556-27-4

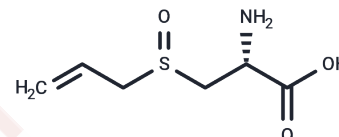
Formula: C₆H₁₁NO₃S

Molecular Weight: 177.22

Storage: Store at low temperature, Keep away from direct sunlight

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	Alliin ((S)-3-(Allylsulphinyl)-L-alanine) is a garlic organosulfur compound that possesses various pharmacological properties. alliin protected against LPS-induced ALI by activating PPAR γ , which subsequently inhibited LPS-induced NF- κ B activation and inflammatory response. Alliin might be used as an anti-inflammatory agent in the treatment of ALI.
Targets(IC50)	NF- κ B, PPAR
In vivo	LPS-induced ALI was induced in BALB/c mice by intranasal instillation of LPS. ?Alliin was administered intraperitoneally to mice 1 h after LPS treatment. ?Alliin markedly inhibited lung myeloperoxidase (MPO) activity and wet/dry (W/D) ratio induced by LPS. ?Alliin also inhibited TNF- α and IL-1 β in the bronchoalveolar lavage fluid (BALF) induced by LPS. ?Furthermore, LPS-induced lung pathological injury was attenuated by treatment of alliin. ?LPS-induced NF- κ B activation was significantly inhibited by alliin. ?In addition, the expression of peroxisome proliferator-activated receptor γ (PPAR γ) was up-regulated by treatment of alliin. ?Taken together, Alliin protected against LPS-induced ALI by activating PPAR γ , which subsequently inhibited LPS-induced NF- κ B activation and inflammatory response.

Solubility Information

Solubility	DMSO: 0.44 mg/mL (2.48 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	5.6427 mL	28.2135 mL	56.427 mL
5 mM	1.1285 mL	5.6427 mL	11.2854 mL
10 mM	0.5643 mL	2.8214 mL	5.6427 mL
50 mM	0.1129 mL	0.5643 mL	1.1285 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

Wang Y L , Guo X Y , He W , et al. Effects of alliin on LPS-induced acute lung injury by activating PPAR γ [J]. *Microbial Pathogenesis*, 2017, 110:375-379.

Deng X, Yang P, Gao T, et al. Allicin attenuates myocardial apoptosis, inflammation and mitochondrial injury during hypoxia-reoxygenation: an in vitro study. *BMC Cardiovascular Disorders*. 2021 Apr 21;21(1):200. doi: 10.1186/s12872-021-01918-6.

Deng X, Yang P, Gao T, et al. Allicin attenuates myocardial apoptosis, inflammation and mitochondrial injury during hypoxia-reoxygenation: an in vitro study[J]. *BMC Cardiovascular Disorders*. 2021, 21(1): 1-9.

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