

S-1-Propenyl-L-cysteine

Chemical Properties

CAS No. :	52438-09-2
Formula:	C6H11NO2S
Molecular Weight:	161.22
Storage:	Store under nitrogen, Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>

Biological Description

Description	S-1-Propenyl-L-cysteine, a stereoisomer of S-allyl-L-cysteine, exhibits immunomodulatory effects and has been demonstrated to decrease blood pressure in hypertensive animal models. S-1-Propenyl-L-cysteine may serve as a valuable molecular probe for investigating immune regulation, vascular homeostasis, and hypertension-associated biochemical pathways in cardiovascular and inflammation-related research settings.
Targets(IC50)	Immunology/Inflammation related
In vitro	Method: Real-time PCR was measured in HUVECs treated with S-1-Propenyl-L-cysteine (SIPC) (50 µM) for 4, 8, or 24 h. Result: S-1-Propenyl-L-cysteine (SIPC) effectively enhanced the expression of HMOX1[1].
In vivo	Method: Spontaneously hypertensive rats (6.5mg/kg) were orally administered S-1-Propenyl-L-cysteine (SIPC) for 10 weeks. Result: Propenyl-L-cysteine (SIPC) induced the degradation of MyD88 and increased the protein level of LC3B-II and inhibited liver infammation in spontaneously hypertensive rats[2].

Solubility Information

Solubility	H2O: 2.08 mg/mL (12.9 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	6.2027 mL	31.0135 mL	62.027 mL
5 mM	1.2405 mL	6.2027 mL	12.4054 mL
10 mM	0.6203 mL	3.1014 mL	6.2027 mL
50 mM	0.1241 mL	0.6203 mL	1.2405 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

Kodera Y, et al. Chemical and Biological Properties of S-1-Propenyl-L-Cysteine in Aged Garlic Extract. *Molecules*. 2017 Mar 31;22(4).

Tsuneyoshi T, et al. S-1-Propenylcysteine augments BACH1 degradation and heme oxygenase 1 expression in a nitric oxide-dependent manner in endothelial cells. *Nitric Oxide*. 2019 Mar 1;84:22-29.

Suzuki JI, et al. Anti-inflammatory action of cysteine derivative S-1-propenylcysteine by inducing MyD88 degradation. *Sci Rep*. 2018 Sep 20;8(1):14148.

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