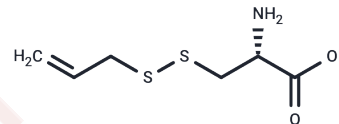


S-Allylmercaptocysteine

Chemical Properties

CAS No. :	2281-22-3
Formula:	C ₆ H ₁₁ NO ₂ S ₂
Molecular Weight:	193.29
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	S-Allylmercaptocysteine (SAMC) is an organic sulfur compound extracted from garlic, with anti-cancer, anti-inflammatory, and antioxidant properties. It protects against hepatocellular damage, improves alcoholic liver disease by modulating insulin receptor signaling, and enhances anti-tumor immunity by inhibiting PD-L1 expression.
Targets(IC50)	Apoptosis,NF-κB,Nrf2
In vitro	S-Allylmercaptocysteine (250 μmol/L, 24h) can improve chemical damage caused by chemical induction of normal mouse liver cell line AML-12, EC50 = 178.4 μmol/L. [1]
In vivo	S-Allylmercaptocysteine (300 mg/kg, administered one day at a time, 90 days by gavage) effectively improved ALD-induced weight loss, steatosis, insulin resistance, and inflammation without affecting the health status of control mice. [1] S-Allylmercaptocysteine inhibits tumor development and progression by promoting the infiltration of CD8 T cells and NK cells, reducing the frequency of immunosuppressive Treg cells in tumor tissues, and enhancing systemic immune function. [2]

Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble or slightly soluble) H ₂ O: 1 mg/mL (5.17 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	5.1736 mL	25.8679 mL	51.7357 mL
5 mM	1.0347 mL	5.1736 mL	10.3471 mL
10 mM	0.5174 mL	2.5868 mL	5.1736 mL
50 mM	0.1035 mL	0.5174 mL	1.0347 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

Luo P, et al. S-Allylmercaptocysteine improves alcoholic liver disease partly through a direct modulation of insulin receptor signaling. *Acta Pharm Sin B*. 2021 Mar;11(3):668-679.

Zhao J, et al. S-allylmercaptocysteine promotes anti-tumor immunity by suppressing PD-L1 expression. *Biomed Pharmacother*. 2023 May;161:114446.

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