

## L-Homocysteine

## Chemical Properties

CAS No. : 6027-13-0

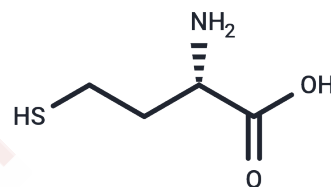
Formula: C<sub>4</sub>H<sub>9</sub>NO<sub>2</sub>S

Molecular Weight: 135.19

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	L-Homocysteine is a biological thiol involved in various diseases and pathological conditions. It is a marker for atherosclerosis and can exacerbate intestinal inflammation in inflammatory bowel disease (IBD) by promoting the expression of 5-LOX and COX-2, making it suitable for inducing vascular endothelial inflammation models.
Targets(IC50)	Endogenous Metabolite,Cysteine Protease
In vitro	L-Homocysteine (100 mM, 24h) promoted the expression of cathepsin V in HUVECs and induced vascular inflammation. [2]
In vivo	L-Homocysteine induced cathepsin V expression in endothelial cells in a mouse model of hyperhomocysteinemia induced by a high methionine diet. [2]

## Solubility Information

Solubility	H <sub>2</sub> O: 33.3 mg/mL (246.32 mM),Sonication is recommended. DMSO: < 0.1 mg/mL (insoluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	7.397 mL	36.985 mL	73.970 mL
5 mM	1.4794 mL	7.397 mL	14.794 mL
10 mM	0.7397 mL	3.6985 mL	7.397 mL
50 mM	0.1479 mL	0.7397 mL	1.4794 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.

### Reference

Finkelstein JD, et al. Homocysteine. *Int J Biochem Cell Biol.* 2000 Apr;32(4):385-9.

Leng YP, et al. L-Homocysteine-induced cathepsin V mediates the vascular endothelial inflammation in hyperhomocysteinaemia. *Br J Pharmacol.* 2018 Apr;175(8):1157-1172.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481