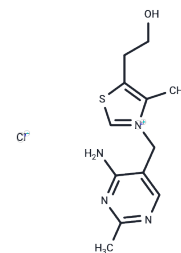


## Thiamine monochloride

## Chemical Properties

CAS No. :	59-43-8
Formula:	C <sub>12</sub> H <sub>17</sub> ClN <sub>4</sub> O <sub>5</sub>
Molecular Weight:	300.81
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	Thiamine monochloride (Vitamin B1) is an essential vitamin with erythropoietic, glucose-regulatory, antioxidant, and mood-regulatory properties. It inhibits lead-induced lipid peroxidation, preventing lead poisoning, and plays a crucial role in cellular energy production from ingested food while enhancing normal neuronal activity.
Targets(IC50)	Antioxidant,Endogenous Metabolite,Antibacterial

## Solubility Information

Solubility	H <sub>2</sub> O: 252.5 mg/mL (839.4 mM),Sonication is recommended. DMSO: 11.62 mg/mL (38.63 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	3.3244 mL	16.6218 mL	33.2436 mL
5 mM	0.6649 mL	3.3244 mL	6.6487 mL
10 mM	0.3324 mL	1.6622 mL	3.3244 mL
50 mM	0.0665 mL	0.3324 mL	0.6649 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

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Bonke D, et al. Improvement of fine motoric movement control by elevated dosages of vitamin B1, B6, and B12 in target shooting. *Int J Vitam Nutr Res Suppl.* 1989;30:198-204.

Marchi M, et al. Studies on metabolism of thiamine chloride ester monophosphate of bis-D-glucosamine. II. Effect of TCMPG in vitamin B1-deficient rats. *Int J Vitam Nutr Res.* 1978;48(3):268-269.

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