

Trimethylamine N-oxide dihydrate

Chemical Properties

CAS No. : 62637-93-8

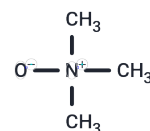
H₂OH₂OFormula: C₃H₁₃NO₃

Molecular Weight: 111.14

Pure form: -20°C for 3 years | In solvent: -80°C for 1

Storage: year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Trimethylamine N-oxide dihydrate (TMANO dihydrate) is a gut microbiota-dependent metabolite derived from dietary choline and other trimethylamine-containing nutrients. It induces inflammation by activating the ROS/NLRP3 inflammasome and promotes fibroblast differentiation and cardiac fibrosis via the TGF- β /Smad2 signaling pathway. TMANO dihydrate can be used to establish models of cardiac hypertrophy and cardiac fibrosis.
Targets(IC50)	Endogenous Metabolite

Solubility Information

Solubility	DMSO: 20 mg/mL (179.95 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (18 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	8.9977 mL	44.9883 mL	89.9766 mL
5 mM	1.7995 mL	8.9977 mL	17.9953 mL
10 mM	0.8998 mL	4.4988 mL	8.9977 mL
50 mM	0.180 mL	0.8998 mL	1.7995 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

Tang WH, et al. Intestinal microbial metabolism of phosphatidylcholine and cardiovascular risk. N Engl J Med. 2013 Apr 25;368(17):1575-84.

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