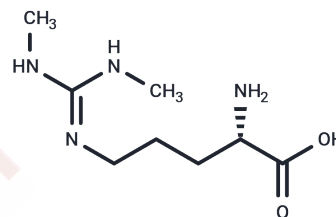


SDMA

Chemical Properties

CAS No. :	30344-00-4
Formula:	C ₈ H ₁₈ N ₄ O ₂
Molecular Weight:	202.25
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	SDMA (Symmetric dimethylarginine) is the most potent endogenous inhibitor of nitric oxide synthase (NOS), with higher levels in patients with end-stage renal disease (ESRD).
Targets(IC50)	NF-κB, Endogenous Metabolite, NO Synthase
In vitro	SDMA inhibited dose dependently the NO synthesis in intact endothelial cells, whereas it had no effect on protein expression of NOS. This effect was associated with an increase in reactive oxygen species. Co-incubation with L-arginine but not D-arginine reversed the effect of SDMA on NOS pathway. Suggest that SDMA reduced the endothelial NO synthesis, probably by limiting L-arginine supply to NOS. It is concluded that SDMA might be a useful parameter for detecting patients in very early stages of chronic kidney disease and for determining their risk for developing cardiovascular disease[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (247.22 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 (9.89 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	4.9444 mL	24.7219 mL	49.4438 mL
5 mM	0.9889 mL	4.9444 mL	9.8888 mL
10 mM	0.4944 mL	2.4722 mL	4.9444 mL
50 mM	0.0989 mL	0.4944 mL	0.9889 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

Bode-Boger, S. M . Symmetrical Dimethylarginine: A New Combined Parameter for Renal Function and Extent of Coronary Artery Disease[J]. Journal of the American Society of Nephrology, 2006, 17(4):1128-1134.

Wang Y, Wu M, Chen D, et al.SDMA attenuates renal tubulointerstitial fibrosis through inhibition of STAT4.Journal of Translational Medicine.2023, 21(1): 1-13.

Toxic Dimethylarginines: Asymmetric Dimethylarginine (ADMA) and Symmetric Dimethylarginine (SDMA).

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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