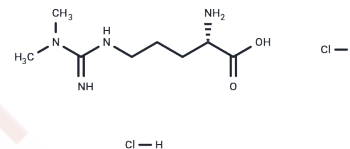


## NG,NG-dimethyl-L-Arginine dihydrochloride

## Chemical Properties

CAS No. : 220805-22-1  
 Formula: C<sub>8</sub>H<sub>20</sub>Cl<sub>2</sub>N<sub>4</sub>O<sub>2</sub>  
 Molecular Weight: 275.18  
 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	NG,NG-dimethyl-L-Arginine dihydrochloride is an endogenous nitric oxide synthase inhibitor. Nitric oxide (NO) that is synthesised from L-arginine contributes to the regulation of blood pressure and to host defence[1].
Targets(IC50)	NO Synthase
In vitro	NG,NG-dimethyl-L-Arginine (ADMA) was found to be able to inhibit macrophage and vascular NO synthase. When added to a cytosolic preparation of macrophage NO synthase, ADMA could cause dose-dependent inhibition of NO formation. In the presence of added arginine, ADMA could inhibited NO synthesis and the inhibitory effects of ADMA were prevented by addition of L-arginine so that the rate of NO synthesis did not significantly differ from control values [1].
In vivo	Animal study showed that the injection of 1-30 mg/kg ADMA into 3 anaesthetised guineapigs could cause dose-dependent increases in mean arterial blood pressure. Moreover, during continuous infusion of ADMA, which caused plasma ADMA concentrations to rise approximately 9-fold, the systolic blood pressure was raised by nearly 15 % [1].

## Solubility Information

Solubility	Ethanol: 11 mg/mL (39.97 mM),Sonication is recommended. DMSO: 7 mg/mL (25.44 mM),Sonication is recommended. H <sub>2</sub> O: 14 mg/mL (50.88 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	3.634 mL	18.1699 mL	36.3399 mL
5 mM	0.7268 mL	3.634 mL	7.268 mL
10 mM	0.3634 mL	1.817 mL	3.634 mL
50 mM	0.0727 mL	0.3634 mL	0.7268 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

Wu M, et al. Renal asymmetric dimethylarginine inhibits fibrosis. *FEBS Open Bio*. 2020 Oct;10(10):2003-2009. doi: 10.1002/2211-5463.12949. Epub 2020 Aug 30.

Wu M, et al. Reduced asymmetric dimethylarginine accumulation through inhibition of the type I protein arginine methyltransferases promotes renal fibrosis in obstructed kidneys. *FASEB J*. 2019 Jun;33(6):6948-6956.

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