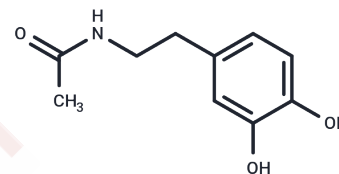


## N-acetyldopamine

## Chemical Properties

CAS No. :	2494-12-4
Formula:	C10H13NO3
Molecular Weight:	195.22
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	N-Acetyldopamine is a natural catecholamine exhibiting immunomodulatory and antioxidant effects, capable of attenuating LPS-induced TNF- $\alpha$ and superoxide production in THP-1 cells. It inhibits sepiapterin reductase activity.
Targets(IC50)	Antioxidant, Reductase, Endogenous Metabolite, ROS, TNF
In vitro	N-acetyldopamine (0-400 $\mu$ M) treatment of THP-1 cells for 24 hours exhibited a dose-dependent, significant inhibitory effect on LPS-stimulated TNF- $\alpha$ production [1]. N-acetyldopamine (0-400 $\mu$ M) pretreatment of HL-60-derived neutrophils for 30 minutes moderately reduced PMA- and fMLP-stimulated superoxide generation in a dose-dependent manner [1].

## Solubility Information

Solubility	DMSO: 80 mg/mL (409.79 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: 4 mg/mL (20.49 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

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	1mg	5mg	10mg
1 mM	5.1224 mL	25.6121 mL	51.2243 mL
5 mM	1.0245 mL	5.1224 mL	10.2449 mL
10 mM	0.5122 mL	2.5612 mL	5.1224 mL
50 mM	0.1024 mL	0.5122 mL	1.0245 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

Hanine Barek, et al. Unraveling Complex Molecular Transformations of N- $\beta$ -alanyldopamine That Account for Brown Coloration of Insect Cuticle. *Rapid Commun Mass Spectrom.* 2017 Aug 30;31(16):1363-1373.

Perianayagam MC, et al. Immune-modulating effects of melatonin, N-acetylserotonin, and N-acetyldopamine. *Ann N Y Acad Sci.* 2005 Aug;1053:386-93.

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