

Stachydrine

Chemical Properties

CAS No. : 471-87-4

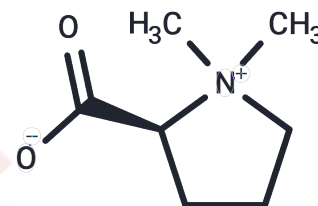
Formula: C₇H₁₃NO₂

Molecular Weight: 143.18

Keep away from direct sunlight, Store at low temperature

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

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Stachydrine (N,N-Dimethyl-L-proline) is a major constituent of Chinese herb leonurus heterophyllus sweet used to promote blood circulation and dispel blood stasis. Stachydrine (N,N-Dimethyl-L-proline) can inhibit the NF-κB signal pathway. Stachydrine (N,N-Dimethyl-L-proline) is a biomarker for the consumption of citrus fruits.
Targets(IC50)	NF-κB, Endogenous Metabolite
In vitro	Various concentrations of stachydrine intervention (10 ⁻⁶) - 10 ⁻⁴) mol/L showed better anti-hypertrophic effect and decreased the number of ROS positive myocardial cell (P<0.05). Meanwhile, intervention of stachydrine significantly suppressed the level of p-IκappaB (ser32) protein in the cytosol and NF-kappaB (p65) protein in the nucleus (P<0.05).
Cell Research	Myocardial cells of neonatal rats were incubated with angiotensin II for 48 hours to establish myocardial cell hypertrophy models. The cell surface area and protein/DNA ratio were detected as index for hypertrophy of myocardial cells. ROS positive myocardial cell were counted by means of flow cytometry, the expression of p-IκappaB (ser32) protein in the cytosol and NF-kappaB (p65) protein in the nucleus were also detected by Western blot.

Solubility Information

Solubility	DMSO: 82.5 mg/mL (576.2 mM), Sonication is recommended. H ₂ O: 32 mg/mL (223.49 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 (13.97 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	6.9842 mL	34.9211 mL	69.8422 mL
5 mM	1.3968 mL	6.9842 mL	13.9684 mL
10 mM	0.6984 mL	3.4921 mL	6.9842 mL
50 mM	0.1397 mL	0.6984 mL	1.3968 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

Guo W , Zhang C , Liao Y L , et al. [Effect of Leonurus stachydrine on myocardial cell hypertrophy]]. Zhong yao cai = Zhongyao cai = Journal of Chinese medicinal materials, 2012, 35(6):940-943.

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