

D-Arginine

Chemical Properties

CAS No. : 157-06-2

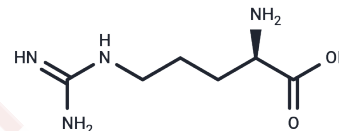
Formula: C₆H₁₄N₄O₂

Molecular Weight: 174.2

Keep away from moisture

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	D-Arginine is the D-isomer and inactive form of L-Arginine. D-Arginine is an endogenous metabolite and inhibitor of EC 4.1.1.19 (arginine decarboxylase), has broad-spectrum toxicity to microorganisms, and acts as a regulator of microbial subpopulations.
Targets(IC50)	Endogenous Metabolite
In vivo	In male albino mice, D-Arginine was administered via intraperitoneal injection (700-1400 mg/kg; single dose) to evaluate the effects on the central nervous system and toxicity. At 700 mg/kg, D-Arginine exhibited central excitatory effects, while at 1400 mg/kg, D-Arginine produced central depressant effects, including prolonged barbiturate-induced sleep and significant anticonvulsant activity against pentylenetetrazole-induced seizures. The LD ₅₀ was determined to be 2800 mg/kg, and pretreatment with propranolol (2 mg/kg) or betamethasone (0.5 mg/kg) increased the LD ₅₀ to 3600 mg/kg and 3300 mg/kg, respectively. [1]

Solubility Information

Solubility	H ₂ O: 20 mg/mL (114.81 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.7405 mL	28.7026 mL	57.4053 mL
5 mM	1.1481 mL	5.7405 mL	11.4811 mL
10 mM	0.5741 mL	2.8703 mL	5.7405 mL
50 mM	0.1148 mL	0.5741 mL	1.1481 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

Navarro E, Alonso SJ, Martín FA, Castellano MA. Toxicological and pharmacological effects of D-Arginine. Basic Clin Pharmacol Toxicol. 2005 Sep;97(3):149-54.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481