Data Sheet (Cat.No.T0358)

TargetMol

Aminoguanidine hydrochloride

Chemical Properties

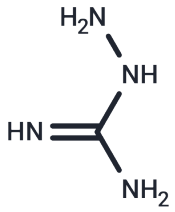
CAS No. : 1937-19-5

Formula: CH6N4·HCl

Molecular Weight: 110.55

Appearance: no data available

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



Biological Description

Description	Aminoguanidine hydrochloride (Hydrazinecarboximidamide) is a diamine oxidase and NO synthase inhibitor, used in the treatment of diabetic nephropathy.
Targets(IC50)	NOS,NO Synthase
In vivo	Aminoguanidine ameliorates neonatal hypoxic-ischemic brain damage and that temporal profiles of NO correlated with the neuroprotective effect of aminoguanidine. Neuroprotection by AG is attributable to suppression of NO produced by iNOS after the end of the hypoxic period, during the reoxygenation phase. The half-life of AG is estimated to be between 6 and 8 h in vivo and approximately 4.4 h in human with normal renal function.AG is also an inhibitor of the formation of advanced glycation end products. Systematically administered advanced glycation end product-modified BSA increases cerebral infarct size in an adult rat, which is attenuated by AG[2].

Solubility Information

Solubility	DMSO: 50 mg/mL (452.28 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: 20 mg/mL (180.91 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	9.0457 mL	45.2284 mL	90.4568 mL
5 mM	1.8091 mL	9.0457 mL	18.0914 mL
10 mM	0.9046 mL	4.5228 mL	9.0457 mL
50 mM	0.1809 mL	0.9046 mL	1.8091 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.

Reference

Rokkas T, et al. Digestion. 1990, 46 Suppl 2:447-457.
Bi G, Liang J, Bian Y, et al.Polyamine-mediated ferroptosis amplification acts as a targetable vulnerability in cancer.Nature Communications.2024, 15(1): 2461.
Tsuji M, et al. Pediatr Res. 2000, 47(1):79-83.
Brownlee M, et al. Science. 1986, 232(4758):1629-1632.

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