

Creatine

Chemical Properties

CAS No. : 57-00-1

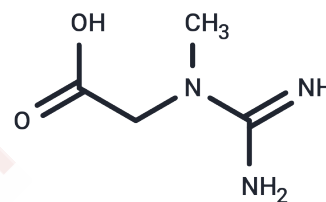
Formula: C₄H₉N₃O₂

Molecular Weight: 131.13

Keep away from direct sunlight

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	Creatine (Methylguanidoacetic acid) is an amino acid that occurs in vertebrate tissues and in urine. In muscle tissue, creatine generally occurs as phosphocreatine. Creatine is excreted as creatinine in the urine. Creatine functions as part of the cell's energy shuttle. The high energy phosphate group of ATP is transferred to creatine to form phosphocreatine in the following reaction: Cr + ATP → PCr + ADP. This reaction is reversibly catalyzed by creatine kinase. In the human body, creatine is synthesized mainly in the liver by the use of parts from three different amino acids: arginine, glycine, and methionine. 95% of it is later stored in the skeletal muscles and the rest is stored in the brain, heart, and testes.
Targets(IC50)	Endogenous Metabolite, Dopamine Receptor

Solubility Information

Solubility	H ₂ O: 8.06 mg/mL (61.47 mM), Sonication is recommended. DMSO: Insoluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	7.626 mL	38.1301 mL	76.2602 mL
5 mM	1.5252 mL	7.626 mL	15.252 mL
10 mM	0.7626 mL	3.813 mL	7.626 mL
50 mM	0.1525 mL	0.7626 mL	1.5252 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

Subramanian A , Gupta A , Saxena S , et al. Proton MR CSF analysis and a new software as predictors for the differentiation of meningitis in children[J]. NMR in biomedicine, 2005, 18(4):213-225.

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