Product Data Sheet

Product Name: 2-Guanidinoacetic acid
Cat. No.: GC33645

Chemical Properties

Cas. No.	352-97-6		
SMILES	O=C(O)CNC(N)=N		
Formula	$C_3H_7N_3O_2$	M.Wt	117.11
Solubility	1M HCl: 50 mg/mL (426.95 mM; ultrasonic and adjust pH to 1 with HCl); Water: < 0.1 mg/mL (insoluble)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	2-Guanidinoacetic acid		

Background

Glycocyamine is a metabolite of glycine and precursor in the biosynthesis of creatine.[1,2] It is formed from glycine by glycine amidinotransferase (GATM) in the kidney and pancreas, transported to the liver, and methylated by guanidinoacetate N-methyltransferase (GAMT) to form creatine.[1] Levels of glycocyamine are altered in individuals with cerebral creatine deficiency syndromes (CCDSs), inborn errors of metabolism characterized by deficiencies in GATM or GAMT.[3]

1.Ostojic, S.M.Cellular bioenergetics of guanidinoacetic acid: The role of mitochondriaJ. Bioenerg. Biomembr.47(5)369-372(2015) 2.Portocarero, N., and Braun, U.The physiological role of guanidinoacetic acid and its relationship with arginine in broiler chickensPoult. Sci.100(7)101203(2021) 3.Stockler, S., Schutz, P.W., and Salomons, G.S.Cerebral creatine deficiency syndromes: Clinical aspects, treatment and pathophysiologySubcell. Biochem.46149-166(2007)

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