Guanidinoethyl sulfonate
Item No. 17572

CAS Registry No.: 543-18-0
Formal Name: 2-[[aminoiminomethyl]amino]-ethanesulfonic acid
Synonyms: NSC 667063, Taurocyamine
MF: C₇H₁₂N₃O₃S
FW: 167.2
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures

For long term storage, we suggest that guanidinoethyl sulfonate be stored as supplied at -20°C. It should be stable for at least two years.

Guanidinoethyl sulfonate is supplied as a crystalline solid. Guanidinoethyl sulfonate is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of guanidinoethyl sulfonate be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of guanidinoethyl sulfonate in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Guanidinoethyl sulfonate, also known as taurocyamine, is a natural guanidine-taurine analog derived from taurine. It is an intermediate of taurine and hypotaurine metabolism and is phosphorylated by taurocyamine kinase. Guanidinoethyl sulfonate competitively inhibits taurine uptake by sodium-dependent taurine transporters in rat hepatocytes (Kᵢ = 1.75 mM). It also acts as a competitive glycine receptor antagonist in mouse striatal neurons. Plasma levels of guanidinoethyl sulfonate are significantly increased in patients with chronic renal failure.

References

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