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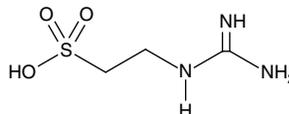
Product Information



Guanidinoethyl sulfonate

Item No. 17572

CAS Registry No.: 543-18-0
Formal Name: 2-[(aminoiminomethyl)amino]-ethanesulfonic acid
Synonyms: NSC 667063, Taurocyamine
MF: C₃H₉N₃O₃S
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-aurine analog derived from taurine. It is an intermediate of taurine and hypotaurine metabolism and is phosphorylated by taurocyamine kinase.¹ Guanidinoethyl sulfonate competitively inhibits taurine uptake by sodium-dependent taurine transporters in rat hepatocytes (K_i = 1.75 mM).² It also acts as a competitive glycine receptor antagonist in mouse striatal neurons.³ Plasma levels of guanidinoethyl sulfonate are significantly increased in patients with chronic renal failure.⁴

References

1. Uda, K., Saishoji, N., Ichinari, S., *et al.* Origin and properties of cytoplasmic and mitochondrial isoforms of taurocyamine kinase. *FEBS J.* **272**, 3521-3530 (2005).
2. Ohkuma, S., Tamura, J., Kuriyama, K., *et al.* Characteristics of taurine transport in freshly isolated rat hepatocytes. Japan. *J. Pharmacol.* **31**, 1061-1070 (1981).
3. Sergeeva, O.A., Chepkova, A.N., and Hass, H.L. Guanidinoethyl sulphonate is a glycine receptor antagonist in striatum. *Br. J. Pharmacol.* **137**, 855-860 (2002).
4. Tanaka, A., Takahashi, Y., Mizokuchi, M., *et al.* Plasma, urinary, and erythrocyte concentrations of guanidino compounds in patients with chronic renal failure. *Ren Fail.* **21(5)**, 499-514 (1999).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/17572

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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