



Product Information

6-Aminohexanoic acid SigmaUltra

Product Number **A 7824**
Store at Room Temperature

Product Description

Molecular Formula: $C_6H_{13}NO_2$

Molecular Weight: 131.2

CAS Number: 60-32-2

pK_a: 4.43 (-COOH), 10.75 (-NH₂)¹

Melting point: 204-206 °C¹

Synonyms: 6-aminocaproic acid, ε-amino-n-caproic acid, EACA¹

Trace elemental analyses have been performed on the SigmaUltra 6-aminohexanoic acid. The Certificate of Analysis provides lot-specific results. SigmaUltra 6-aminohexanoic acid is for applications which require tight control of elemental content.

6-Aminohexanoic acid is a lysine analog that has been widely used in studies of blood clotting. EACA has been shown to inhibit the activation of C1 of the complement system, without inhibiting the already active form of C1.² EACA has been reported to inhibit binding of plasminogen to activated platelets, using a fluorescent flow cytometry-based assay.³ EACA has been used *in vitro* to inhibit clot lysis in blood that has been exogenously induced by tissue plasminogen activator.⁴ In a study in cultured rat C6 glioma cells, EACA promotes rapid dissociation of plasmin from the cells, which inhibits the activation of plasminogen and subsequent fibrolysis.⁵ The isolation of catheptic carboxypeptidase B from T-cell activating factor derived supernatants has been described, using EACA-agarose and EACA as eluting agent.⁶

In the preparation of media equivalents for the entrapment of neonatal aortic rat smooth muscle cells, with fibrin as an alternative biopolymer to collagen, EACA has been used to inhibit fibrin degradation by the cells.⁷ The derivatization of synthetic peptides with EACA to enhance their hydrophobicity and coating efficiency for an ELISA protocol has been described.⁸ An *in vitro* analysis of the effects of ultrafiltration on EACA and its antifibrinolytic properties has been reported.⁹

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in water (50 mg/ml), yielding a clear, colorless solution.

References

1. The Merck Index, 12th ed., Entry #451.
2. Soter, N. A., et al., Inhibition by ε-aminocaproic acid of the activation of the first component of the complement system, *J. Immunol.* **114(3)**, 928-932 (1975).
3. Adelman, B., et al., Plasminogen interactions with platelets in plasma. *Blood*, **72(5)**, 1530-1535 (1988).
4. Krishnamurti, C., et al., Inhibitory effects of lysine analogues on t-PA induced whole blood clot lysis. *Thromb. Res.*, **73(6)**, 419-430 (1994).
5. Humphries, J. E., et al., Fibrinogenolytic and fibrinolytic activity of cell-associated plasmin. *Arterioscler. Thromb.*, **13(1)**, 48-55 (1993).

6. Dessaint, J. P., et al., Catheptic carboxypeptidase B as a major component in "T-cell activating factor" of macrophages. *J. Immunopharmacol.*, **1(3)**, 399-414 (1979).
7. Grassl, E. D., et al., Fibrin as an alternative biopolymer to type-I collagen for the fabrication of a media equivalent. *J. Biomed. Mater. Res.*, **60(4)**, 607-612 (2002).
8. Pyun, J. C., et al., Modification of short peptides using ϵ -aminocaproic acid for improved coating efficiency in indirect enzyme-linked immunosorbent assays (ELISA). *J. Immunol. Methods*, **208(2)**, 141-149 (1997).
9. Petterson, C. M., et al., The effects of ultrafiltration on ϵ -aminocaproic acid: an *in vitro* analysis. *J. Extra Corpor. Technol.*, **34(3)**, 197-202 (2002).

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