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ProductInformation

Vitronectin
from bovine plasma

Product Number **V9881**
Storage Temperature 2-8 °C

CAS# 83380-82-9
Synonyms: s-protein; serum spreading factor; epiboin

Product Description

Vitronectin is a glycoprotein present in plasma and tissues. Together with fibronectin, vitronectin is one of the major cell adhesion proteins of plasma. Although these proteins have similar functions and have an Arg-Gly-Asp (R-G-D) cell recognition sequence, they are structurally and immunologically distinct.

Vitronectin may function in several biological processes. In addition to promoting the adhesion of various cells in culture, vitronectin binds to glycosaminoglycans, is incorporated as an inhibitor to the membrane cytolytic attack complex of the complement system, interacts with thrombin and antithrombin III during coagulation, and may have a physiological role in the coagulation pathway.

The N-terminal sequence of vitronectin is identical to somatomedin B, which is also present in plasma. This sequence is followed by an R-G-D sequence, which interacts with a specific cell-surface receptor. Then a sequence of repeat units follows. The central domain of the protein is enriched with hydrophobic residues. Near the C-terminus is a 12 kDa arginine rich region, responsible for heparin binding activity, which is observed after a conformational change in the protein structure. The conformational change occurs *in vitro* after urea treatment and *in vivo* after binding to the thrombin-antithrombin II complex.

Vitronectin may be used for attachment of cells with integrin receptors, which bind vitronectin: platelets, endothelial cells, melanoma cells, and osteosarcoma. It is recommended to use vitronectin as a cell culture substratum at 0.1 µg/cm^2. Optimal conditions for attachment must be determined for each cell line and application.

The product is lyophilized from a buffered saline solution.

Precautions and Disclaimer

This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Vitronectin rapidly absorbs to glass and polystyrene plastic surfaces. This property, together with its high affinity for other plasma proteins, makes it difficult to handle.

Preparation Instructions

The product is soluble in water (50 µg/ml).

Storage/Stability

It is recommended to store the product at 2-8 °C.

References

1. Barnes, D., and Silnutzer, J., J. Biol. Chem., **258**, 12548-12552 (1983).
2. Suzuki, S., et al., Proc. Natl. Acad. Sci. USA, **83**, 8614-8618 (1986).
3. Preissner, K.T., Blut., **59**, 419-431 (1989).
4. Preissner, K.T., and Jenne, D., Thromb. Haemost., **66**, 123-132 (1991).

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