

Product Information

Vitronectin, human

Recombinant, expressed in HEK 293 cells cell culture tested

SRP3186

Storage Temperature -20 °C

Synonyms: Serum-spreading factor, V75, VTN, s-protein, epiboin

Product Description

Vitronectin is a secreted glycoprotein which is synthesized in the liver.¹ It circulates primarily in monomeric form, but can undergo conformational change to a structure that forms disulfide linked multimers.² Vitronectin can efficiently bind to and incorporate into the extracellular matrix (ECM) of various human tissues supporting cell adhesion and differentiation, as well as regulating ECM composition and stability.³ Within the matrix, vitronectin can support cell adhesion through binding to various integrins and other proteoglycans.⁴ Additionally, recombinant vitronectin can function as a chemically defined matrix component in human embryonic stem cell renewal media.⁵

Recombinant human Vitronectin is a protein consisting of 459 amino acids. It exists in two forms: a single chain and a clipped form consisting of two chains held together by disulfide bonds resulting from an endogenous cleavage. Under reducing conditions, the single chain migrates at an apparent molecular mass of 75 kDa on SDS-PAGE, and the clipped form migrates at molecular masses of 65 kDa and 10 kDa.

The biological activity of recombinant human vitronectin was tested in culture by measuring the ability of immobilized vitronectin to support adhesion of CHO cells.

Purity: ≥ 95% (SDS-PAGE)

Purity: ≥ 95% (HPLC)

Endotoxin level: ≤1 EU/μg of vitronectin

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store the lyophilized product at -20 °C. The product is stable for at least 2 years as supplied.

Preparation Instructions

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1–1.0 mg/mL. Do not vortex. This solution can be stored at 2–8 °C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20 °C to -80 °C.

References

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3. Preissner, K.T., Structure and biological role of vitronectin. *Annu. Rev. Cell Biol.*, 7, 275-310 (1991).
4. Kim, S. et al., Extracellular matrix and cell signalling: the dynamic cooperation of integrin, proteoglycan and growth factor receptor. *J. Endocrinol.*, 209, 139-151 (2011).
5. Braam, S.R. et al., Recombinant Vitronectin Is a Functionally Defined Substrate That Supports Human Embryonic Stem Cell Self-Renewal via $\alpha V\beta 5$ Integrin. *Stem Cells*, 26, 2257–2265 (2008).

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