

CULTREX[®] Product Data

For Research Use Only. Not For Use In Diagnostic Procedures

Bovine Vitronectin NZHD*

Catalog #: 3417-001-01

Size: 50 µg

Description: Vitronectin is an extracellular, soluble, disulfide-linked dimer, composed of a 75 kDa and a 65 kDa peptide chain with a total molecular weight of 140 kDa. Vitronectin is a major plasma glycoprotein that promotes cellular adhesion and spreading,^{1,2} inhibits the membrane-damaging effect of the terminal cytolytic complement pathway,³ and binds to several serpin serine protease inhibitors.^{4,5} Vitronectin can be used for coating tissue culture surfaces to promote cell adhesion, proliferation and differentiation, or as an additive for serum-free media. Vitronectin is purified from bovine plasma and is provided 0.2 µm sterile filtered.

Specifications:

Source: Bovine plasma from New Zealand**
Storage Buffer: 10 mM Sodium Phosphate, pH 7.7, 8M Urea, 5 mM EDTA, 500 mM NaCl.
Storage: Store at -80°C in a manual defrost freezer. Avoid freeze-thaw cycles.
Purity: >90% by SDS-PAGE.

**New Zealand was granted negligible BSE risk disease status at the 75th General Session of the World Organization for Animal Health (OIE) (http://www.oie.int/eng/info/en_statesb.htm), and GBR I status by the European Food Safety Authority (http://ec.europa.eu/food/fs/sc/ssc/out292_en.pdf). No cases of BSE have been reported in New Zealand since monitoring began in 1989 (http://www.oie.int/eng/info/en_esbcarte.htm).

Materials Qualification:

Functional Assay:

- Tested for ability to promote attachment of MCF-7 cells.

Sterility Testing:

- No bacterial or fungal growth detected after incubation at 37°C for 14 days following USP XXIV Chapter 71 sterility testing protocols.
- No mycoplasma contamination detected by PCR.
- Endotoxin concentration < 20 EU/ml by LAL assay.

Coating Procedure:

The recommended working concentration is 0.5 µg/cm², (0.5-5 µg/ml) of growth surface, depending on cell type and experimental condition. Only dilute as much Vitronectin as needed; it is not stable for extended periods of time when diluted. Store concentrated material in aliquots to reduce the number of freeze-thaw cycles.

- Thaw stock solution on ice for several hours. Position plates on ice and dilute the Vitronectin stock solution appropriately with cold sterile PBS. Mix and transfer to the wells of cold tissue culture plates. Spread the solution to completely cover the bottom of the wells.

*NZHD= New Zealand Herd Derived

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- The following is a guide for the suggested volumes required per well:

Plate Type	Volume Vitronectin per Well
6 wells (or 35 mm dish)	2 ml
24 wells	400 µl
48 wells	100 µl
96 wells	50 µl

- Coat wells with Fibronectin solution and incubate at 4°C overnight.
- Aspirate solution, and rinse the wells once with sterile PBS.
- Block wells with 2% BSA, PBS for one hour at 37°C.
- Add cells to wells (optimize concentration for each cell line and experimental condition).
- Culture and analyze cells as needed (optimize for each cell line and experimental condition).

References:

1. Vuento M, Korkkolainen M, Kuusela P, Holtta E. (1985) Isolation of a novel cell-attachment and spreading-promoting protein from human serum. *Biochem J.* 227:421-7.
2. Hayman EG, Pierschbacher MD, Suzuki S, Ruoslahti E (1985). Vitronectin--a major cell attachment promoting protein in fetal bovine serum. *Exp Cell Res.* 160:245-58.
3. Tschopp J, Masson D, Schafer S, Peitsch M, Preissner KT (1988). The heparin binding domain of S protein/vitronectin binds to complement components C7, C8, and C9 and perforin from cytolytic T cells and inhibits their lytic activities. *Biochemistry* 27:4103-9.
4. Wiman B, Almquist A, Sigurdardottir O, Lindahl T. (1988) Plasminogen activator inhibitor 1 (PAI) is bound to vitronectin in plasma. *FEBS Lett.* 242:125-8.
5. Czekay RP, Aertgeerts K, Curriden SA, Loskutoff DJ. (2003) Plasminogen activator inhibitor-1 detaches cells from extracellular matrices by inactivating integrins. *J Cell Biol.* 160:781-91.



Lot Specific Data:

Lot number:

Concentration:

Endotoxin (LAL):

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Catalog #: 3417-001-01

Storage: -80 °C

(Manual Defrost Freezer)

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