Fibronectin, Human

FOR, CELL CULTURE, CELL ADHESION
AND CELL BIOLOGY
Catalog Number **5050**

DESCRIPTION

Fibronectin is a broad range natural cell adhesion factor found as a dimer in plasma and in multimeric form in the extracellular matrix and on cell surfaces. Fibronectin is a glycoprotein found at a size of 220-250 kD subunits lined by two disulfide bonds. Fibronectin is used to promote cell attachment and adhesion in a variety of cells. In addition to its cell attachment functions, Fibronectin may involve interactions with collagen, heparin and other cell surface glycosaminoglycans.

Advanced BioMatrix's human Fibronectin is provided at a concentration of 0.5 mg/ml with 1.0 mg of Fibronectin being dissolved in 2.0 ml of 0.45M NaCl, 20mM Tris-HCl and 12% glycerol. Fibronectin is purified from human plasma by the method of Ruoslahti et al [(1)] using a gel affinity column and sterilized by 0.2µ filtration.

APPLICATIONS

Fibronectin is used as a thin coating. The optimal concentration for cell attachment and culture may differ for various cell types. Some experimentation may be required to determine the optimal conditions for individual cell culture systems. *Fibronectin is not for human use as supplied.*

CHARACTERIZATION

Source: Human plasma

Purity: Fibronectin has a purity of >95% based on Coomassie brilliant blue stain of 7% SDS-PAGE.

Concentration: The concentration of Fibronectin is 0.5 mg/ml with 1.0 mg of Fibronectin being dissolved in 2.0 ml of buffer.

Cell Attachment Activity: 24 well plates were coated with Fibronectin in PBS (0.3 ml/well) at 37°C overnight. After blocking by BSA, TIG-3 cells (JCRB 0506) (5 X 10^4) cells/ 1 ml DMEM/well) were added and incubated at 37°C for 90 minutes. Attached cells were counted with a Coulter counter.

pH: Fibronectin is dissolved in buffer with the pH being approximately 7.

Storage: It is recommended that Fibronectin be stored below -20°C and repeat thawing and freezing be avoided.

INSTRUCTIONS FOR USE

Use these recommendations as guidelines to determine the optimal coating conditions for your culture system.

1. Thaw Fibronectin and dilute to desired concentration using serum-free medium or PBS (Ca++, Mg++ free). The final solution should be sufficiently dilute so that the volume added covers the surface evenly.
2. Add appropriate amount of diluted material to culture surface.
3. Incubate at room temperature for approximately1 hour.
4. Aspirate remaining material.
5. Rinse plates carefully with dH_2O– avoid scratching bottom surface of plates.
6. Plates are ready for use. They may also be stored at 2-8°C damp or air dried if sterility is maintained.

PRECAUTIONS

The human-source raw material used in the production of this product tested negative for hepatitis B virus, hepatitis C virus (HCV), human immunodeficiency virus type-1 (HIV-1) and type-2 (HIV-2).and Treponema pallidum. Handle as if potentially infectious.

(1) Ruoslahti, E., E.G. Hayman M. Pierschbacher, and E. Engvall (1982) Fibronectin: Purification, immunochemical properties, and biological activities. Meth. Enzymol. 82 Pt A: 803-831.