**DESCRIPTION**

**Source**  Human plasma-derived Fibronectin protein
The human plasma used for the isolation of this product was certified by the supplier to be HIV-1 and HBsAg negative at the time of shipment. Human blood products should always be treated in accordance with universal handling precautions.

**SPECIFICATIONS**

**Activity**  Measured by its ability to support cell attachment and spreading when used as a substratum for cell culture.
In this application, the recommended concentration for this effect is 1-5 µg/cm².
Fibronectin can also be added in the media to support cell spreading at a concentration of 0.5-50 µg/mL.
Optimal concentration depends on cell type as well as the application or research objectives.

**Endotoxin Level**  <0.10 EU per 1 µg of the protein by the LAL method.

**Purity**  >90%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Formulation**  Supplied as a 0.2 μm filtered solution in Tris-HCl, NaCl and Urea. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Shipping**  The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage**  Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
• 6 months from date of receipt, 2 to 8 °C as supplied.
• 3 months, 2 to 8 °C under sterile conditions after opening.
Avoid vortexing and excessive agitation.

**BACKGROUND**

Fibronectin (Fn) is a large modular glycoprotein that is found as a polymeric fibrillar network in the extracellular matrix (ECM) and as soluble disulfide-linked dimeric protomers in plasma and other body fluids. The protein subunit is made up of three types of homologous structural repeats termed Fn type I, type II, and type III repeats. Multiple isoforms of the protein formed by alternative splicing at numerous sites, resulting in insertions of extra type III domains (EDA and ECB) or parts of the variable type III connecting segment (V/IIICS), have been identified. Fibronectin is a ligand for fibrin, heparin, chondroitin sulfate, collagen/gelatin, and many integrin receptors. It is involved in multiple cellular processes including cell adhesion/migration, blood clotting, morphogenesis, tissue repair, and cell signaling.

Fibronectin functions are mediated by the insoluble polymeric fibrils in the ECM. Conversion of the non-functional soluble Fibronectin to Fibronectin fibrils in the ECM is tightly regulated. The process is initiated by binding of Fibronectin to cell surface integrins, resulting in conformational changes and exposure of cryptic epitopes necessary for polymerization (1, 2).

**References:**