# IBL Data Sheet

Code No. 54071

**Fibronectin Neosilk®, Plasma**

Volume : 1 mg

Lot No. :

Expiration date :

**Introduction** : A plasma fibronectin is present in plasma at high concentrations and plays roles in blood coagulation and wound healing. The fibronectin from plasma has been used as a cell-adhesive substrate (a coating material) for cultured cells[1]. However, the fibronectin is derived from animal or human plasma, therefore, has risks of blood-borne infections.

Fibronectin Neosilk®, Plasma is a recombinant human fibronectin which is produced by transgenic silkworms as a homodimer of a plasma-abundant splicing variant, EDA−, EDB− and IIICS+[2]. This recombinant fibronectin has the cell-adhesive activity comparable with or more than that of natural plasma fibronectin, and has a specific feature of free from animal derived materials. This product can be used as a coating material for various cultured cells including mesenchymal stem cells.

**Content** : Recombinant human fibronectin (EDA−, EDB−, IIICS+) homodimers.

**Source** : Extracted from cocoons of transgenic silkworms.

**Purification** : Purified by two types of multimodal chromatography (not by gelatin affinity chromatography).

**Form** : Lyophilized from 2 mL of 10 mM Tris-HCl, pH8.0 and 2% sucrose.

**Storage** : Lyophilized product should be stored at 2–10℃.

**Reconstitution method** : When dissolved in 2 mL of sterile purified water, the concentration of the fibronectin will be 0.5 mg/mL. After reconstitution, white coagulates may sometimes be observed in the solution, but these do not affect the protein concentration.

**Storage after reconstitution** : The reconstituted solution may be stored at 2–10℃ for up to two months. For longer storage, aliquot into small volume, and store below −20℃. Avoid repeated freeze-thaw cycles. The solution is stable below −20℃ for at least 6 months.

**Example of coating method** : Dilute the reconstituted solution with PBS (−) or other solution to appropriate concentrations, and coat the culture surface with the diluted solution.
The typical coating concentration is 1–5 μg/㎠. In the case of coating onto a 6 well plate at 2.5 μg/㎠ (24 μg/well), 2 mL of the diluted fibronectin solution to 12 μg/mL is added to the wells. After incubation at 37℃ for 1 hr, remove the solution, wash with PBS (−), and seed your cells.

**References** :
1. Parisi L. et. al., A glance on the role of fibronectin in controlling cell response at biomaterial interface. *Jpn. Dent. Sci. Rev*. 56, 50 (2020)
2. To WS, Midwood KS. Plasma and cellular fibronectin: distinct and independent functions during tissue repair. *Fibrogenesis Tissue Repair* 4, 21 (2011)



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