

Product Information

Anti-Fibronectin antibody, Mouse monoclonal

Clone IST-3, purified from hybridoma cell culture

Product Number **SAB4200845**

Product Description

Monoclonal Anti-Fibronectin antibody (mouse IgG1 isotype) is derived from the IST-3 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with purified human plasma fibronectin (GeneID 2335).¹⁻² The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2). The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-Fibronectin antibody specifically recognizes epitope located within the fourth type-three repeat of human plasma fibronectin. The antibody localizes plasma and cellular fibronectin both in its natural and denatured-reduced forms.² The product reacts with fibronectin from human, goat, bovine⁴, porcine⁵, mouse⁶, rat⁷, dog and chicken origin. The antibody may be used in various immunochemical techniques including Immunoblotting¹, ELISA, RIA¹⁻², Immunofluorescence³ and Immunohistochemistry⁴.

Fibronectin (FN) is a multi-domain glycoprotein composed of two nearly identical disulfide-bound polypeptides with molecular weights of 220-240 KDa. It is a ubiquitous and essential component of the extracellular matrix (ECM) which plays a vital role during tissue repair.⁸ Fibronectin functions both as a regulator of cellular processes and as an important scaffolding protein to maintain and direct tissue organization and ECM composition.⁸ It is widely expressed by multiple cell types and is critically important in vertebrate development, as demonstrated by the early embryonic lethality of mice with targeted inactivation of the FN gene.⁹ Two types of Fibronectin are present in vertebrates: soluble plasma Fibronectin and insoluble cellular Fibronectin. The plasma form of Fibronectin (formerly known as cold-insoluble globulin or CIG) is synthesized by hepatocytes, secreted to blood and upon tissue injury, is incorporated into fibrin clots effecting platelet function and mediating hemostasis.⁸ Cellular Fibronectin is synthesized by many cell types, including fibroblasts, endothelial cells, chondrocytes, synovial cells and myocytes. It is assembled by cells as they migrate into the clot to reconstitute damaged tissue.^{8,10}

Fibronectin is suggested to enhance cell adhesion and spreading and to affect the routes of cell migration both

in vivo and in culture.¹¹ It has been shown that upon malignant transformation many cells lose their surface bound fibronectin.¹²

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

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

For continuous use, store at 2-8°C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunofluorescence: a working concentration of 2.5-5 µg/mL is recommended using human foreskin fibroblast Hs68 cells.

Note: In order to obtain best results in different techniques and preparations it is recommended to determine optimal working concentration by titration test.

References

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