SANTA CRUZ BIOTECHNOLOGY, INC.

Fibronectin (616): sc-81767

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Fibronectin is an extracellular matrix glycoprotein present on most cell surfaces, in extracellular fluids and in plasma. A high molecular weight heterodimeric protein, it was originally discovered as a protein missing from the surfaces of virus-transformed cells, and it has been shown to be involved in various functions including cell adhesion, cell motility and wound healing. Alternative splicing and glycosylation give rise to several different forms of Fibronectin, some of which exhibit restricted tissue distribution or association with malignancies. It has been shown that myofibroblast phenotype formation correlates with the occurrence of glycosylated Fibronectin and Fibronectin splice variants in Dupuytren's disease.

REFERENCES

1. Akiyama, S.K., et al. 1981.The structure of Fibronectin and its role in cellular adhesion. J. Supramol. Struct. Cell. Biochem. 16: 345-348.
2. Ruoslahti, E., et al. 1982. Molecular and biological interactions of Fibronectin. J. Invest. Dermatol. 79: 65s-68s.
3. Keen, J., et al. 1984. Monoclonal antibodies that distinguish between human cellular and plasma Fibronectin. Mol. Biol. Med. 2: 15-27.
4. Keski-Oja, J., et al. 1987. Fibronectin and viral pathogenesis. Rev. Infect. Dis. 9: 404-411.

CHROMOSOMAL LOCATION

Genetic locus: FN1 (human) mapping to 2q35.

SOURCE

Fibronectin (616) is a mouse monoclonal antibody raised against Fibronectin secreted by embryonic fibroblasts of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Fibronectin (616) is recommended for detection of Fibronectin of human and porcine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Fibronectin siRNA (h): sc-29315, Fibronectin shRNA Plasmid (h): sc-29315-SH and Fibronectin shRNA (h) Lentiviral Particles: sc-29315-V.

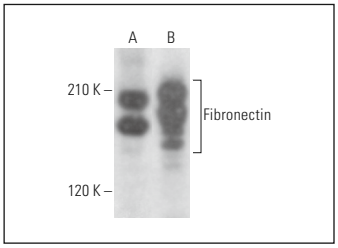
Molecular Weight of Fibronectin: 220 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, Hs68 cell lysate: sc-2230 or Hep G2 cell lysate: sc-2227.

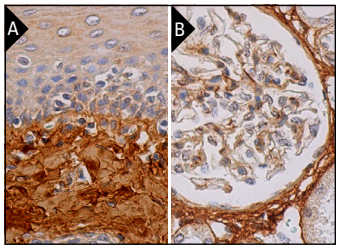
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Fibronectin (616): sc-81767. Western blot analysis of Fibronectin expression in U-87 MG (**A**) and Hs68 (**B**) whole cell lysates.



Fibronectin (616): sc-81767. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing staining of extracellular matrix and cytoplasmic staining of squamous epithelial cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing staining of extracellular matrix and cytoplasmic and membrane staining of cells in glomeruli (**B**).

SELECT PRODUCT CITATIONS

1. Mirmalek-Sani, S.H., et al. 2013. Porcine pancreas extracellular matrix as a platform for endocrine pancreas bioengineering. Biomaterials 34: 5488-5495.
2. Bourdón-Santoyo, M., et al. 2014. Preliminary study of an *in vitro* development of new tissue applying mechanical stimulation with a bioreactor as an alternative for ligament reconstruction. Rev. Invest. Clin. 66: S100-S110.
3. Karaoz, E., et al. 2019. Reduction of inflammation and enhancement of motility after pancreatic islet derived stem cell transplantation following spinal cord injury. J. Korean Neurosurg. Soc. 62: 153-165.
4. Liu, W., et al. 2019. Targeted regulation of fibroblast state by CRISPR-mediated CEBPA expression. Respir. Res. 20: 281.
5. Purdy, M.P., et al. 2020. YAP/TAZ are activated by mechanical and hormonal stimuli in myometrium and exhibit increased baseline activation in uterine fibroids. Reprod. Sci. 27: 1074-1085.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.