SANTA CRUZ BIOTECHNOLOGY, INC.

Fibronectin (P5F3): sc-18827

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. Supermol. Struct. Cell. Biochem. 16: 345-348.
2. Ruoslahti, E., et al. 1982. Molecular and biological interactions of Fibronectin. J. Invest. Dermatol. 79: S65-S68.

CHROMOSOMAL LOCATION

Genetic locus: FN1 (human) mapping to 2q35; Fn1 (mouse) mapping to 1 C3.

SOURCE

Fibronectin (P5F3) is a mouse monoclonal antibody raised against a peptide mapping near the C-terminus of Fibronectin of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for biological studies, sc-18827 L, 200 µg/0.1 ml.

APPLICATIONS

Fibronectin (P5F3) is recommended for detection of the adhesive peptide FN Ch/1 within the carboxyl HepII region of Fibronectin of mouse, rat, human and primate 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 siRNA (m): sc-35371, Fibronectin shRNA Plasmid (h): sc-29315-SH, Fibronectin shRNA Plasmid (m): sc-35371-SH, Fibronectin shRNA (h) Lentiviral Particles: sc-29315-V and Fibronectin shRNA (m) Lentiviral Particles: sc-35371-V.

Molecular Weight of Fibronectin: 220 kDa.

Positive Controls: HT-1080 whole cell lysate: sc-364183, U-87 MG cell lysate: sc-2411 or human platelet extract: sc-363773.

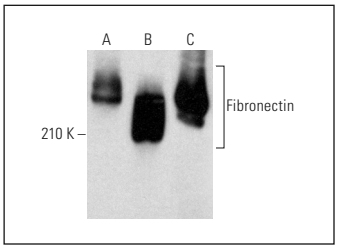
RESEARCH USE

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

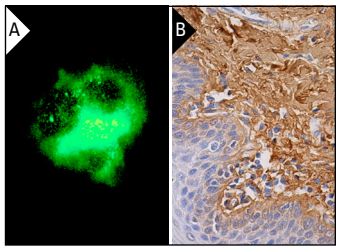
STORAGE

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

DATA



Fibronectin (P5F3): sc-18827. Western blot analysis of Fibronectin expression in HT-1080 (**A**), U-87 MG (**B**) whole cell lysates and human platelet extract (**C**).



Fibronectin (P5F3): sc-18827. Immunofluorescence staining of methanol-fixed Hep G2 cells showing cytoplasmic and extracellular staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing staining of extracellular matrix (**B**).

SELECT PRODUCT CITATIONS

1. Schor, S.L., et al. 2003. Migration-stimulating factor: a genetically truncated onco-fetal fibronectin isoform expressed by carcinoma and tumor-associated stromal cells. Cancer Res. 63: 8827-8836.
2. Zode, G.S., et al. 2011. Transforming growth factor-β2 increases extracellular matrix proteins in optic nerve head cells via activation of the Smad signaling pathway. Mol. Vis. 17: 1745-1758.
3. Li, F., et al. 2013. Livin promotes progression of breast cancer through induction of epithelial-mesenchymal transition and activation of AKT signaling. Cell. Signal. 25: 1413-1422.
4. Hou, T., et al. 2015. Norcantharidin inhibits renal interstitial fibrosis by downregulating PP2Ac expression. Am. J. Transl. Res. 7: 2199-2211.
5. Llopis-Hernández, V., et al. 2016. Material-driven Fibronectin assembly for high-efficiency presentation of growth factors. Sci. Adv. 2: e1600188.
6. Purohit, T., et al. 2017. Smad3-dependent CCN2 mediates Fibronectin expression in human skin dermal fibroblasts. PLoS ONE 12: e0173191.
7. Cheng, Z.A., et al. 2019. Nanoscale coatings for ultralow dose BMP-2-driven regeneration of critical-sized bone defects. Adv. Sci. 6: 1800361.
8. Li, J., et al. 2020. Bixin protects against kidney interstitial fibrosis through promoting Stat6 degradation. Front. Cell Dev. Biol. 8: 576988.
9. Li, J., et al. 2022. Stat6 contributes to renal fibrosis by modulating PPARα-mediated tubular fatty acid oxidation. Cell Death Dis. 13: 66.

CONJUGATES

See **Fibronectin (EP5): sc-8422** for Fibronectin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.