SANTA CRUZ BIOTECHNOLOGY, INC.

Fibromodulin (H-11): sc-166406

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Small leucine-rich proteoglycans (SLRPs), such as Decorin, Biglycan, Fibromodulin and Lumican mediate extracellular matrix organization and are binding partners of TGFβ. Fibromodulin is a collagen-binding Keratan sulphate proteoglycan that influences adhesion processes of connective tissue and plays a role in fibrillogenesis by regulating collagen fibril spacing and thickness. The core proteins of SLRPs consist of a central region of leucine-rich repeats flanked by disulfide-linkages of the terminal domains. Fibromodulin is a ubiquitous protein that is most prominent in articular cartilage, tendon and ligament. The human Fibromodulin gene maps to chromosome 1q32.1 and encodes a 376 amino acid protein.

REFERENCES

1. Antonsson, P., et al. 1993. Structure and deduced amino acid sequence of the human Fibromodulin gene. Biochim. Biophys. Acta 1174: 204-206.
2. Sztrolovics, R., et al. 1994. Localization of the human Fibromodulin gene (FMOD) to chromosome 1q32 and completion of the cDNA sequence. Genomics 23: 715-717.
3. Online Mendelian Inheritance in Man, OMIM™. 1995. Johns Hopkins University, Baltimore, MD. MIM Number: 600245. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: FMOD (human) mapping to 1q32.1; Fmod (mouse) mapping to 1 E4.

SOURCE

Fibromodulin (H-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 43-71 near the N-terminus of Fibromodulin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Fibromodulin (H-11) is available conjugated to agarose (sc-166406 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166406 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166406 PE), fluorescein (sc-166406 FITC), Alexa Fluor® 488 (sc-166406 AF488), Alexa Fluor® 546 (sc-166406 AF546), Alexa Fluor® 594 (sc-166406 AF594) or Alexa Fluor® 647 (sc-166406 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166406 AF680) or Alexa Fluor® 790 (sc-166406 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166406 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

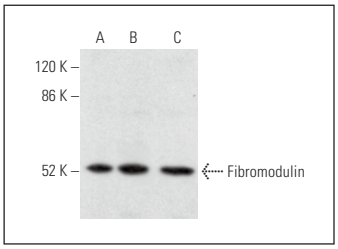
Fibromodulin (H-11) is recommended for detection of Fibromodulin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Fibromodulin siRNA (h): sc-40995, Fibromodulin siRNA (m): sc-44823, Fibromodulin shRNA Plasmid (h): sc-40995-SH, Fibromodulin shRNA Plasmid (m): sc-44823-SH, Fibromodulin shRNA (h) Lentiviral Particles: sc-40995-V and Fibromodulin shRNA (m) Lentiviral Particles: sc-44823-V.

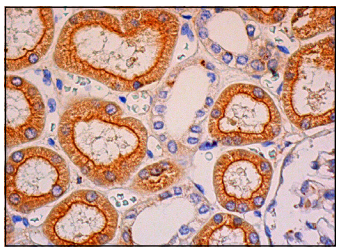
Molecular Weight of Fibromodulin: 67 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or A-431 whole cell lysate: sc-2201.

DATA



Fibromodulin (H-11): sc-166406. Western blot analysis of Fibromodulin expression in Hep G2 (**A**), A-431 (**B**) and HeLa (**C**) whole cell lysates.



Fibromodulin (H-11): sc-166406. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing apical membrane and cytoplasmic staining of cells in a subset of tubules.

SELECT PRODUCT CITATIONS

1. Swindell, W.R., et al. 2019. A zingerone analog, acetyl zingerone, bolsters matrisome synthesis, inhibits MMPs, and represses IL-17A target gene expression. J. Invest. Dermatol. 140: 602-614.
2. García-Piqueras, J., et al. 2019. Class I and Class II small leucine-rich proteoglycans in human cutaneous pacinian corpuscles. Ann. Anat. 224: 62-72.
3. Moura, S.R., et al. 2020. miR-99a in bone homeostasis: regulating osteogenic lineage commitment and osteoclast differentiation. Bone 134: 115303.
4. Mun, S., et al. 2022. Transcriptome profile of membrane and extracellular matrix components in ligament-fibroblastic progenitors and cementoblasts differentiated from human periodontal ligament cells. Genes 13: 659.

STORAGE

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