SANTA CRUZ BIOTECHNOLOGY, INC.

MMP-21 (C-7): sc-398935

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The matrix metalloproteinases (MMPs) are a family of peptidase enzymes responsible for the degradation of extracellular matrix components, including collagen, gelatin, fibronectin, laminin and proteoglycan. Transcription of MMP genes is differentially activated by phorbol ester, lipopolysaccharide (LPS) or staphylococcal enterotoxin B (SEB). MMP catalysis requires both calcium and zinc. MMP-21 is 569 amino acid residues in length and consists of a prodomain, catalytic domain, and haemopexin-like domain. It is the human orthologue for XMMP in *X. laevis* and CyMMP in *C. pyrrhogaster*. MMP-21 is expressed in various fetal and adult tissues. It a possible target gene of the Wnt pathway, and the expression of this protein is controlled by Pax and Notch transcription factors. MMP-21 may play an important role in embryogenesis, tissue development (particularly in the brain), tumor progression and possibly apoptosis.

REFERENCES

1. Birkedal-Hansen, H., et al. 1993. Matrix metalloproteinases: a review. Crit. Rev. Oral Biol. Med. 4: 197-250.
2. Reinemer, P., et al. 1994. Structural implications for the role of the N terminus in the "superactivation" of collagenases. A crystallographic study. FEBS Lett. 338: 227-233.

CHROMOSOMAL LOCATION

Genetic locus: MMP21 (human) mapping to 10q26.13; Mmp21 (mouse) mapping to 7 F3.

SOURCE

MMP-21 (C-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 241-263 within an internal region of MMP-21 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MMP-21 (C-7) is available conjugated to agarose (sc-398935 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398935 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398935 PE), fluorescein (sc-398935 FITC), Alexa Fluor® 488 (sc-398935 AF488), Alexa Fluor® 546 (sc-398935 AF546), Alexa Fluor® 594 (sc-398935 AF594) or Alexa Fluor® 647 (sc-398935 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398935 AF680) or Alexa Fluor® 790 (sc-398935 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398935 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

MMP-21 (C-7) is recommended for detection of MMP-21 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MMP-21 siRNA (h): sc-62627, MMP-21 siRNA (m): sc-62628, MMP-21 shRNA Plasmid (h): sc-62627-SH, MMP-21 shRNA Plasmid (m): sc-62628-SH, MMP-21 shRNA (h) Lentiviral Particles: sc-62627-V and MMP-21 shRNA (m) Lentiviral Particles: sc-62628-V.

Molecular Weight of human MMP-21: 62 kDa.

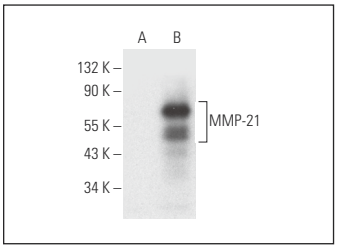
Molecular Weight of mouse MMP-21: 49 kDa.

Positive Controls: MMP-21 (h2): 293T Lysate: sc-372461.

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.

DATA



MMP-21 (C-7): sc-398935. Western blot analysis of MMP-21 expression in non-transfected: sc-117752 (**A**) and human MMP-21 transfected: sc-372461 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Mao, S., et al. 2021. FKBP51 promotes invasion and migration by increasing the autophagic degradation of TIMP3 in clear cell renal cell carcinoma. Cell Death Dis. 12: 899.

RESEARCH USE

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