SANTA CRUZ BIOTECHNOLOGY, INC.

MMP-8 (B-1): sc-514803

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The matrix metalloproteinases (MMP) 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-8 (also designated neutrophil collagenase, PMNL collagenase or collagenase-2) degrades fibrillar collagen types I, II and III. Unlike other members of the MMP family, MMP-8 is expressed exclusively in inflammatory conditions. MMP-8 is highly expressed in the postpartum uterus, and it is thought to be involved in the postpartum involution of the uterus. MMP-8 is also the predominant collagenase expressed in ulcers and healing wounds.

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: MMP8 (human) mapping to 11q22.2; Mmp8 (mouse) mapping to 9 A1.

SOURCE

MMP-8 (B-1) is a mouse monoclonal antibody raised against amino acids 122-166 mapping within an internal region of MMP-8 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.

APPLICATIONS

MMP-8 (B-1) is recommended for detection of MMP-8 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-8 siRNA (h): sc-35949, MMP-8 siRNA (m): sc-35950, MMP-8 shRNA Plasmid (h): sc-35949-SH, MMP-8 shRNA Plasmid (m): sc-35950-SH, MMP-8 shRNA (h) Lentiviral Particles: sc-35949-V and MMP-8 shRNA (m) Lentiviral Particles: sc-35950-V.

Molecular Weight of latent MMP-8: 65 kDa.

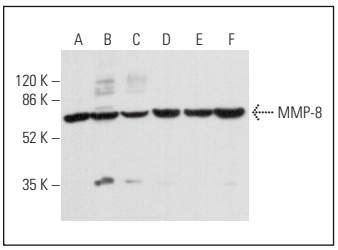
Molecular Weight of active MMP-8: 50 kDa.

Positive Controls: ES-2 cell lysate: sc-24674, SJRH30 cell lysate: sc-2287 or HCT-116 whole cell lysate: sc-364175.

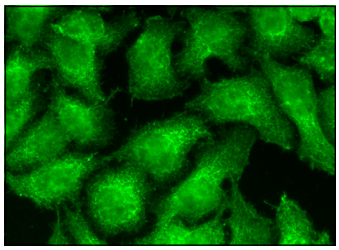
STORAGE

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

DATA



MMP-8 (B-1): sc-514803. Western blot analysis of MMP-8 expression in ES-2 (**A**), SJRH30 (**B**), Hep G2 (**C**), HCT-116 (**D**), C32 (**E**) and A2058 (**F**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



MMP-8 (B-1): sc-514803. Immunofluorescence staining of formalin-fixed HeLa cells showing cytoplasmic vesicles and cell surface localization.

SELECT PRODUCT CITATIONS

1. Basukala, O., et al. 2019. The HPV-18 E7 CKII phospho acceptor site is required for maintaining the transformed phenotype of cervical tumour-derived cells. PLoS Pathog. 15: e1007769.
2. Naim, A., et al. 2020. Matrix metalloproteinase-8 (MMP-8) regulates the activation of hepatic stellate cells (HSCs) through the ERK-mediated pathway. Mol. Cell. Biochem. 467: 107-116.
3. Prahasanti, C., et al. 2020. Exfoliated human deciduous tooth stem cells incorporating carbonate apatite scaffold enhance BMP-2, BMP-7 and attenuate MMP-8 expression during initial alveolar bone remodeling in Wistar rats *(Rattus norvegicus).* Clin. Cosmet. Investig. Dent. 12: 79-85.
4. Chai, Q., et al. 2020. Lung gene expression signatures suggest pathogenic links and molecular markers for pulmonary tuberculosis, adenocarcinoma and sarcoidosis. Commun. Biol. 3: 604.
5. Saskianti, T., et al. 2022. Study of alveolar bone remodeling using deciduous tooth stem cells and hydroxyapatite by vascular endothelial growth factor enhancement and inhibition of matrix metalloproteinase-8 expression *in vivo.* Clin. Cosmet. Investig. Dent. 14: 71-78.
6. Daraban Bocaneti, F., et al. 2023. Expression of collagenases (matrix metalloproteinase-1, -8, -13) and tissue inhibitor of metalloproteinase-3 (TIMP-3) in naturally occurring bovine cutaneous fibropapillomas. Front. Vet. Sci. 9: 1072672.

RESEARCH USE

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

CONJUGATES

See **MMP-1/8 (A-7): sc-137044** for MMP-1/8 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.