SANTA CRUZ BIOTECHNOLOGY, INC.

MMP-13 (H-230): sc-30073

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-13 (also designated collagenase-3) is produced by breast carcinomas and degrades collagen types I, II and III. MMP-13 has wide substrate specificity, and its physiologic expression is limited to situations in which rapid and effective remodeling of collagenous ECM takes place, such as fetal bone development and adult bone remodeling.

CHROMOSOMAL LOCATION

Genetic locus: MMP13 (human) mapping to 11q22.2; Mmp13 (mouse) mapping to 9 A1.

SOURCE

MMP-13 (H-230) is a rabbit polyclonal antibody raised against amino acids 242-471 mapping at the C-terminus of MMP-13 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MMP-13 (H-230) is recommended for detection of MMP-13 of mouse, rat and human 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); partially cross reactive with other MMP family members.

MMP-13 (H-230) is also recommended for detection of MMP-13 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MMP-13 siRNA (h): sc-41559, MMP-13 siRNA (m): sc-41560, MMP-13 shRNA Plasmid (h): sc-41559-SH, MMP-13 shRNA Plasmid (m): sc-41560-SH, MMP-13 shRNA (h) Lentiviral Particles: sc-41559-V and MMP-13 shRNA (m) Lentiviral Particles: sc-41560-V.

Molecular Weight of MMP-13: 48 kDa.

Positive Controls: SCC-4 whole cell lysate: sc-364363.

STORAGE

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

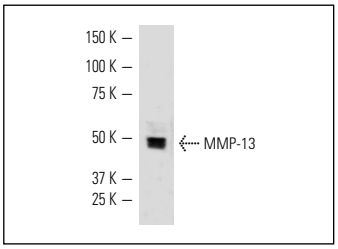
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

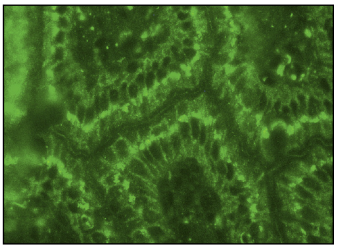
RESEARCH USE

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

DATA



MMP-13 (H-230): sc-30073. Western blot analysis of MMP-13 expression in SCC-4 whole cell lysate.



MMP-13 (H-230) sc-30073. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic and extracellular staining.

SELECT PRODUCT CITATIONS

1. Westwick, J.K., et al. 1994. Bone marrow mononuclear cell transplantation increases metalloproteinase-9 and 13 and decreases tissue inhibitors of metalloproteinase-1 and 2 expression in the liver of cholestatic rats. Proc. Natl. Acad. Sci. USA 91: 6030-6034.
2. Wu, M.H., et al. 2012. Endothelin-1 promotes MMP-13 production and migration in human chondrosarcoma cells through FAK/PI3K/Akt/mTOR pathways. J. Cell. Physiol. 227: 3016-26.
3. Huang, C.Y., et al. 2013. Thrombin promotes matrix metalloproteinase-13 expression through the PKCδ c-Src/EGFR/PI3K/Akt/AP-1 signaling pathway in human chondrocytes. Mediators Inflamm. 2013: 326041.
4. Zhang, L., et al. 2014. Mesenchymal stem cells regulate cytoskeletal dynamics and promote cancer cell invasion through low dose nitric oxide. Curr. Mol. Med. 14: 749-761.
5. Hsieh, W.T., et al. 2014. Exogenous endothelin-1 induces cell migration and matrix metalloproteinase expression in U251 human glioblastoma multiforme. J. Neurooncol. 118: 257-269.
6. Makki, M.S., et al. 2015. MicroRNA-9 promotion of interleukin-6 expression by inhibiting monocyte chemoattractant protein-induced protein 1 expression in interleukin-1β-stimulated human chondrocytes. Arthritis Rheumatol. 67: 2117-28.
7. Du, G., et al. 2015. Osthole inhibits proliferation and induces catabolism in rat chondrocytes and cartilage tissue. Cell. Physiol. Biochem. 36: 2480-2493.