

MMP-2 (K-20): sc-8835

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-2 (also designated type IV collagenase) cleaves collagen types IV, V, VII and X and gelatin type I. Activation of MMP-2 secretion requires the Ras signaling pathway.

CHROMOSOMAL LOCATION

Genetic locus: MMP2 (human) mapping to 16q12.2; Mmp2 (mouse) mapping to 8 C5.

SOURCE

MMP-2 (K-20) is available as either goat (sc-8803) or rabbit (sc-8835-R) polyclonal affinity purified antibody raised against a peptide mapping near the C-terminus of MMP-2 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.

Blocking peptide available for competition studies, sc-8835 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MMP-2 (K-20) is recommended for detection of MMP-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

MMP-2 (K-20) is also recommended for detection of MMP-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MMP-2 siRNA (h): sc-29398, MMP-2 siRNA (m): sc-37264, MMP-2 shRNA Plasmid (h): sc-29398-SH, MMP-2 shRNA Plasmid (m): sc-37264-SH, MMP-2 shRNA (h) Lentiviral Particles: sc-29398-V and MMP-2 shRNA (m) Lentiviral Particles: sc-37264-V.

Molecular Weight of pro-MMP-2: 72 kDa.

Molecular Weight of cleaved MMP-2: 63 kDa.

Positive Controls: ECV304 cell lysate: sc-2269, RAT2 whole cell lysate: sc-364198 or A-375 cell lysate: sc-3811.

RESEARCH USE

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

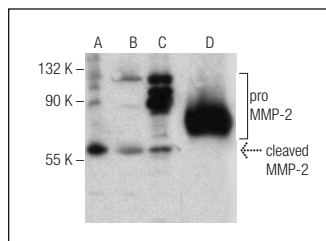
PROTOCOLS

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

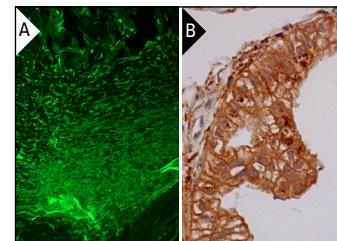
STORAGE

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

DATA



MMP-2 (K-20)-R: sc-8835-R. Western blot analysis of MMP-2 expression in ECV304 (A), A-375 (B) and RAT2 (C) whole cell lysates and human recombinant MMP-2 (D).



MMP-2 (K-20): sc-8835. Immunofluorescence staining of formalin-fixed, paraffin-embedded canine digital flexor tendon, twenty-one days after injury. Note staining in areas of active remodeling and scar formation. Kindly provided by Dr. Timothy Ritty from Washington University School of Medicine (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing membrane and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Yagi, T., et al. 1994. Protective effects of bone marrow-derived endothelial progenitor cells and *Houttuynia cordata* in lipopolysaccharide-induced acute lung injury in rats. *Oncogene* 9: 2433-2440.
2. Robinson, G.A. 1994. Role of fibulin-3 in lung cancer: *in vivo* and *in vitro* analyses. *Mol. Brain Res.* 24: 43-54
3. Mata, K.M., et al. 2010. Combining two potential causes of metalloproteinase secretion causes abdominal aortic aneurysms in rats: a new experimental model. *Int. J. Exp. Pathol.* 92: 26-39.
4. Cheng, C.C., et al. 2011. Bronchiolitis obliterans organizing pneumonia in Swine associated with porcine circovirus type 2 infection. *J. Biomed. Biotechnol.* 2011: 245728.
5. Kim, J.H., et al. 2011. Developmental arrest of scNT-derived fetuses by disruption of the developing endometrial gland as a result of impaired trophoblast migration and invasiveness. *Dev. Dyn.* 240: 627-639.
6. Schuler, P.J., et al. 2012. Urokinase plasminogen activator, uPAR, MMP-2, and MMP-9 in the C6-glioblastoma rat model. *In Vivo* 26: 571-576.
7. Janssens, E., et al. 2013. Matrix metalloproteinase 14 in the zebrafish: an eye on retinal and retinotectal development. *PLoS ONE* 8: e52915.
8. Saran, W.R., et al. 2013. Castor oil polymer induces bone formation with high matrix metalloproteinase-2 expression. *J. Biomed. Mater. Res. A* 102: 324-331.
9. Verslegers, M., et al. 2013. Identification of MMP-2 as a novel enhancer of cerebellar granule cell proliferation. *Mol. Cell. Neurosci.* 57C: 63-72.
10. Gaublotte, D., et al. 2014. Matrix metalloproteinase 2 and membrane type 1 matrix metalloproteinase co-regulate axonal outgrowth of mouse retinal ganglion cells. *J. Neurochem.* 129: 966-979.