

MMP-9 (6-6B): sc-12759

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-9 (also designated 92 kDa type IV collagenase or gelatinase B) has been shown to degrade bone collagens in concert with MMP-1 (also designated interstitial collagenase, fibroblast collagenase or collagenase-1), and cysteine proteases and may play a role in bone osteoclastic resorption. MMP-1 is down-regulated by p53, and abnormality of p53 expression may contribute to joint degradation in rheumatoid arthritis by regulating MMP-1 expression.

CHROMOSOMAL LOCATION

Genetic locus: MMP9 (human) mapping to 20q13.12.

SOURCE

MMP-9 (6-6B) is a mouse monoclonal antibody raised against partially purified MMP-9 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for biological studies, sc-12759 L, 200 µg/0.1 ml.

MMP-9 (6-6B) is available conjugated to agarose (sc-12759 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-12759 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-12759 PE), fluorescein (sc-12759 FITC), Alexa Fluor[®] 488 (sc-12759 AF488), Alexa Fluor[®] 546 (sc-12759 AF546), Alexa Fluor[®] 594 (sc-12759 AF594) or Alexa Fluor[®] 647 (sc-12759 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-12759 AF680) or Alexa Fluor[®] 790 (sc-12759 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

MMP-9 (6-6B) is recommended for detection of MMP-9 of 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), 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 MMP-9 siRNA (h): sc-29400, MMP-9 shRNA Plasmid (h): sc-29400-SH and MMP-9 shRNA (h) Lentiviral Particles: sc-29400-V.

Molecular Weight of MMP-9: 92 kDa.

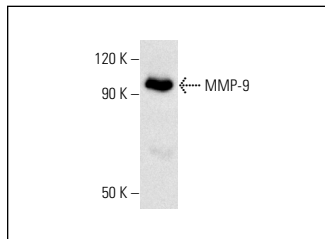
RESEARCH USE

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

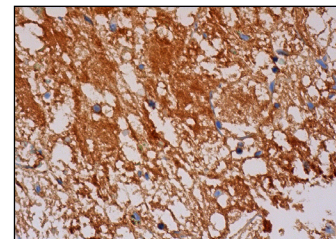
STORAGE

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

DATA



MMP-9 (6-6B): sc-12759. Western blot analysis of human recombinant MMP-9.



MMP-9 (6-6B): sc-12759. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic staining of hematopoietic cells and extracellular staining of reticular tissue.

SELECT PRODUCT CITATIONS

- 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.
- Jonckheere, N., et al. 2012. The mucin MUC4 and its membrane partner ErbB2 regulate biological properties of human CAPAN-2 pancreatic cancer cells via different signalling pathways. *PLoS ONE* 7: e32232.
- Che, J., et al. 2013. Cyclopamine is a novel Hedgehog signaling inhibitor with significant anti-proliferative, anti-invasive and anti-estrogenic potency in human breast cancer cells. *Oncol. Lett.* 5: 1417-1421.
- Liu, W.H., et al. 2014. Amsacrine suppresses matrix metalloproteinase-2 (MMP-2)/MMP-9 expression in human leukemia cells. *J. Cell. Physiol.* 229: 588-598.
- Wang, G.J., et al. 2015. The role of microRNA-1274a in the tumorigenesis of gastric cancer: accelerating cancer cell proliferation and migration via directly targeting FOXO4. *Biochem. Biophys. Res. Commun.* 459: 629-635.
- Ge, L., et al. 2016. MicroRNA-497 suppresses osteosarcoma tumor growth *in vitro* and *in vivo*. *Oncol. Lett.* 11: 2207-2212.
- Kim, J.M., et al. 2017. *Salvia miltiorrhiza* extract inhibits TPA-induced MMP-9 expression and invasion through the MAPK/AP-1 signaling pathway in human breast cancer MCF7 cells. *Oncol. Lett.* 14: 3594-3600.
- Yu, S., et al. 2018. Annexin A9 promotes invasion and metastasis of colorectal cancer and predicts poor prognosis. *Int. J. Mol. Med.* 41: 2185-2192.
- Wang, X., et al. 2019. MicroRNA-34a inhibits cell growth and migration in human glioma cells via MMP-9. *Mol. Med. Rep.* 20: 57-64.

PROTOCOLS

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