

MMP-9 (E-11): sc-393859

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 downregulated 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; Mmp9 (mouse) mapping to 2 H3.

SOURCE

MMP-9 (E-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 678-707 at the C-terminus of MMP-9 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MMP-9 (E-11) is available conjugated to agarose (sc-393859 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393859 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393859 PE), fluorescein (sc-393859 FITC), Alexa Fluor[®] 488 (sc-393859 AF488), Alexa Fluor[®] 546 (sc-393859 AF546), Alexa Fluor[®] 594 (sc-393859 AF594) or Alexa Fluor[®] 647 (sc-393859 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393859 AF680) or Alexa Fluor[®] 790 (sc-393859 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393859 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MMP-9 (E-11) is recommended for detection of MMP-9 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), 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).

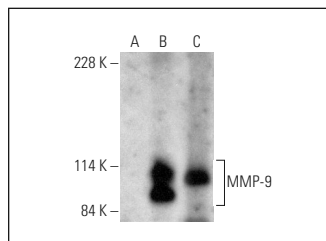
Suitable for use as control antibody for MMP-9 siRNA (h): sc-29400, MMP-9 siRNA (m): sc-29401, MMP-9 shRNA Plasmid (h): sc-29400-SH, MMP-9 shRNA Plasmid (m): sc-29401-SH, MMP-9 shRNA (h) Lentiviral Particles: sc-29400-V and MMP-9 shRNA (m) Lentiviral Particles: sc-29401-V.

Molecular Weight of MMP-9: 92 kDa.

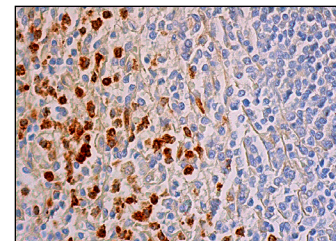
STORAGE

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

DATA



MMP-9 (E-11) HRP: sc-393859 HRP. Direct western blot analysis of MMP-9 expression in non-transfected: sc-117752 (A) and human MMP-9 transfected: sc-176046 (B) 293T whole cell lysates and human lung tissue extract (C).



MMP-9 (E-11): sc-393859. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of subset of cells in red pulp.

SELECT PRODUCT CITATIONS

- Devine, R.D., et al. 2015. Metalloproteinase expression is altered in cardiac and skeletal muscle in cancer cachexia. *Am. J. Physiol. Heart Circ. Physiol.* 309: H685-H691.
- Hsu, Y.Y., et al. 2016. Thrombomodulin promotes focal adhesion kinase activation and contributes to angiogenesis by binding to Fibronectin. *Oncotarget* 7: 68122-68139.
- Lv, J., et al. 2017. Amygdalin ameliorates the progression of atherosclerosis in LDL receptor-deficient mice. *Mol. Med. Rep.* 16: 8171-8179.
- Xing, Y., et al. 2018. Fraxinellone has anticancer activity *in vivo* by inhibiting programmed cell death-ligand 1 expression by reducing hypoxia-inducible factor-1α and STAT3. *Pharmacol. Res.* 135: 166-180.
- Spychala, A. and Rütther, U. 2019. FTO affects hippocampal function by regulation of BDNF processing. *PLoS ONE* 14: e0211937.
- Ko, J.H., et al. 2019. Conditioned media from adipocytes promote proliferation, migration, and invasion in melanoma and colorectal cancer cells. *J. Cell. Physiol.* 234: 18249-18261.
- Zeng, J., et al. 2020. Mesenchymal stem/stromal cells-derived IL-6 promotes nasopharyngeal carcinoma growth and resistance to cisplatin via upregulating CD73 expression. *J. Cancer* 11: 2068-2079.
- Wang, F., et al. 2021. STAT3 enhances radiation-induced tumor migration, invasion and stem-like properties of bladder cancer. *Mol. Med. Rep.* 23: 87.
- Yang, M.H., et al. 2022. Daidzin targets epithelial-to-mesenchymal transition process by attenuating manganese superoxide dismutase expression and PI3K/Akt/mTOR activation in tumor cells. *Life Sci.* 295: 120395.

RESEARCH USE

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

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