SANTA CRUZ BIOTECHNOLOGY, INC.

MMP-10 (I-18): sc-9941

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-3, MMP-10 and MMP-11 (also designated stromelysin-1, -2 and -3) activate procollagenase. MMP-3 activation of procollagenase can occur via two pathways. Direct activation by MMP-3 is slow and activation by MMP-3 in conjunction with tissue or plasma proteinases is rapid. MMP-10 is expressed in small intestine, and it is expressed at lower levels in lung and heart. MMP-11 is specifically expressed in stromal cells of breast carcinomas and contributes to epithelial cell malignancies.

CHROMOSOMAL LOCATION

Genetic locus: MMP10 (human) mapping to 11q22.2.

SOURCE

MMP-10 (I-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MMP-10 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-9941 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MMP-10 (I-18) is recommended for detection of MMP-10 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MMP-10 siRNA (h): sc-41555, MMP-10 shRNA Plasmid (h): sc-41555-SH and MMP-10 shRNA (h) Lentiviral Particles: sc-41555-V.

Molecular Weight of MMP-10: 57 kDa.

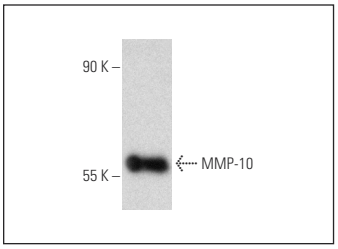
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

DATA



MMP-10 (I-18): sc-9941. Western blot analysis of human recombinant MMP-10.

SELECT PRODUCT CITATIONS

1. Themsche, C., et al. 2004. Stromelysin-2 (matrix metalloproteinase-10) is inducible in lymphoma cells and accelerates the growth of lymphoid tumors *in vivo*. J. Immunol. 173: 3605-3611.
2. Saghizadeh, M., et al. 2010. Adenovirus-driven overexpression of proteinases in organ-cultured normal human corneas leads to diabetic-like changes. Brain Res. Bull. 81: 262-272.
3. Treiber, M., et al. 2011. Myeloid, but not pancreatic, RelA/p65 is required for fibrosis in a mouse model of chronic pancreatitis. Gastroenterology 141: 1473-1485, 1485.e1-1485.e7.
4. Aravindan, S., et al. 2013. Radiation-induced TNFα cross signaling-dependent nuclear import of NFκB favors metastasis in neuroblastoma. Clin. Exp. Metastasis 30: 807-817.
5. Saghizadeh, M., et al. 2013. Enhanced wound healing, kinase and stem cell marker expression in diabetic organ-cultured human corneas upon MMP-10 and cathepsin F gene silencing. Invest. Ophthalmol. Vis. Sci. 54: 8172-8180.
6. Saghizadeh, M., et al. 2014. Normalization of wound healing and stem cell marker patterns in organ-cultured human diabetic corneas by gene therapy of limbal cells. Exp. Eye Res. 129: 66-73.
7. Costa, A.M., et al. 2016. *Helicobacter pylori* activates matrix metalloproteinase-10 in gastric epithelial cells via EGFR and ERK-mediated pathways. J. Infect. Dis. E-published.

RESEARCH USE

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