SANTA CRUZ BIOTECHNOLOGY, INC.

MMP-8 (C-20): sc-8849

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-8 (also designated neutrophil collagenase, PMNL collagenase or collagenase-2) degrades fibrillar collagen types I, II and III. Unlike other members of the MMP family, MMP-8 is expressed exclusively in inflammatory conditions. MMP-8 is highly expressed in the postpartum uterus, and it is thought to be involved in the postpartum involution of the uterus. MMP-8 is also the predominant collagenase expressed in ulcers and healing wounds.

REFERENCES

1. Hasty, K.A., et al. 1990. Human neutrophil collagenase. A distinct gene product with homology to other matrix metalloproteinases. J. Biol. Chem. 265: 11421-11424.
2. Birkedal-Hansen, H., et al. 1993. Matrix metalloproteinases: a review. Crit. Rev. Oral Biol. Med. 4: 197-250.
3. Reinemer, P., et al. 1994. Structural implications for the role of the N-terminus in the 'superactivation' of collagenases. A crystallographic study. FEBS Lett. 338: 227-233.
4. Machein, U. and Conca W. 1997. Expression of several matrix metalloproteinase genes in human monocytic cells. Adv. Exp. Med. Biol. 421: 247-251.
5. Balbin, M., et al. 1998. Collagenase 2 (MMP-8) expression in murine tissue-remodeling processes. Analysis of its potential role in postpartum involution of the uterus. J. Biol. Chem. 273: 23959-23968.
6. Nwomeh, B.C., et al. 1999. MMP-8 is the predominant collagenase in healing wounds and nonhealing ulcers. J. Surg. Res. 81: 189-195.

CHROMOSOMAL LOCATION

Genetic locus: MMP8 (human) mapping to 11q22.3; Mmp8 (mouse) mapping to 9 A1.

SOURCE

MMP-8 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MMP-8 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-8849 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

MMP-8 (C-20) is recommended for detection of MMP-8 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).

MMP-8 (C-20) is also recommended for detection of MMP-8 in additional species, including equine.

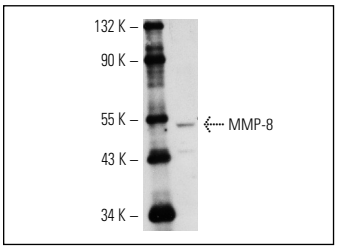
Suitable for use as control antibody for MMP-8 siRNA (h): sc-35949, MMP-8 shRNA Plasmid (h): sc-35949-SH and MMP-8 shRNA (h) Lentiviral Particles: sc-35949-V.

Molecular Weight of latent MMP-8: 65 kDa.

Molecular Weight of active MMP-8: 50 kDa.

Positive Controls: SJRH30 cell lysate: sc-2287.

DATA



MMP-8 (C-20): sc-8849. Western blot analysis of MMP-8 expression in SJRH30 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Akgul, B., et al. 2005. The E7 protein of cutaneous human papillomavirus type 8 causes invasion of human keratinocytes into the dermis in organotypic cultures of skin. Cancer Res. 65: 2216-2223.
2. Xu, Q., et al. 2008. Progesterone receptor modulator CDB-2914 induces extracellular matrix metalloproteinase inducer in cultured human uterine leiomyoma cells. Mol. Hum. Reprod. 14: 181-191.

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.