SANTA CRUZ BIOTECHNOLOGY, INC.

MMP-27 (P-13): sc-109547



BACKGROUND

Metalloproteinases (MMPs) are a family of proteins that are involved in the breakdown of the extracellular matrix during normal cellular events, including reproduction, tissue remodeling and embryonic development. MMPs are crucial in tumor invasion and building of metastatic formations because of their ability to degrade extracellular matrix proteins such as Fibronectin, laminin, gelatins and/or collagen. MMP-27 (matrix metallopeptidase 27) is a 513 amino acid secreted protein that is expressed in B cells. Belonging to the peptidase M10A family, MMP-27 contains four hemopexin-like domains, which is suggested to be involved in substrate recognition. MMP-27, along with other MMP family members, is associated with breast cancer development and tumor progression.

REFERENCES

- Hofmann, U.B., Westphal, J.R., Waas, E.T., Zendman, A.J., Cornelissen, I.M., Ruiter, D.J. and van Muijen, G.N. 1999. Matrix metalloproteinases in human melanoma cell lines and xenografts: increased expression of activated matrix metalloproteinase-2 (MMP-2) correlates with melanoma progression. Br. J. Cancer. 81: 774-782.
- Johansson, N., Ahonen, M. and Kähäri, V.M. 2000. Matrix metalloproteinases in tumor invasion. Cell. Mol. Life Sci. 57: 5-15.
- Hofmann, U.B., Westphal, J.R., Van Muijen, G.N. and Ruiter, D.J. 2000. Matrix metalloproteinases in human melanoma. J. Invest. Dermatol. 115: 337-344.
- Bar-Or, A., Nuttall, R.K., Duddy, M., Alter, A., Kim, H.J., Ifergan, I., Pennington, C.J., Bourgoin, P., Edwards, D.R. and Yong, V.W. 2003. Analyses of all matrix metalloproteinase members in leukocytes emphasize monocytes as major inflammatory mediators in multiple sclerosis. Brain 126 (Pt. 12): 2738-2749.
- Kerkelä, E. and Saarialho-Kere, U. 2003. Matrix metalloproteinases in tumor progression: focus on basal and squamous cell skin cancer. Exp. Dermatol. 12: 109-125.
- Bernal, F., Hartung, H.P. and Kieseier, B.C. 2005. Tissue mRNA expression in rat of newly described matrix metalloproteinases. Biol. Res. 38: 267-271.
- Hegedüs, L., Cho, H., Xie, X. and Eliceiri, G.L. 2008. Additional MDA-MB-231 breast cancer cell matrix metalloproteinases promote invasiveness. J. Cell. Physiol. 216: 480-485.
- Figueira, R.C., Gomes, L.R., Neto, J.S., Silva, F.C., Silva, I.D. and Sogayar, M.C. 2009. Correlation between MMPs and their inhibitors in breast cancer tumor tissue specimens and in cell lines with different metastatic potential. BMC Cancer 9: 20.
- Köhrmann, A., Kammerer, U., Kapp, M., Dietl, J. and Anacker, J. 2009. Expression of matrix metalloproteinases (MMPs) in primary human breast cancer and breast cancer cell lines: New findings and review of the literature. BMC Cancer 9: 188.

CHROMOSOMAL LOCATION

Genetic locus: Mmp27 (mouse) mapping to 9 A1.

SOURCE

MMP-27 (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MMP-27 of mouse 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-109547 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MMP-27 (P-13) is recommended for detection of MMP-27 of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other MMP family members .

Suitable for use as control antibody for MMP-27 siRNA (m): sc-149481, MMP-27 shRNA Plasmid (m): sc-149481-SH and MMP-27 shRNA (m) Lentiviral Particles: sc-149481-V.

Molecular Weight of MMP-27: 59 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) Immunofluo-rescence: 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, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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.