

MAGP-1 (G-7): sc-166075

BACKGROUND

Elastic fibers endow loose connective tissue with a resilience that complements the tensile strength of collagenous fibers. They are composed of the protein elastin and a network of 10-12 nm microfibrils, which contain several glycoproteins, including fibrillin-1, fibrillin-2, and the microfibril-associated glycoproteins MAGP-1 and MAGP-2. During elastogenesis, MAGP-1 and MAGP-2 bind the fibrillins to tropoelastin in the extracellular matrix of several elastic and non-elastic tissues. MAGP-1 is an O-Glycosylated protein secreted to the extracellular space and the extracellular matrix. MAGP-1 associates with Biglycan and elastin in a ternary complex. It can make intermolecular disulfide bonds with other MAGP-1 molecules or with other microfibril components and may form transglutaminase cross-links. Underexpression and overexpression of the zebrafish homolog of MAGP-1 (MAGP-1) protein levels demonstrate the critical role of MAGP-1 in vascular development.

REFERENCES

1. Gibson, M.A. and Cleary, E.G. 1987. The immunohistochemical localisation of microfibril-associated glycoprotein (MAGP) in elastic and non-elastic tissues. *Immunol. Cell Biol.* 65: 345-356.
2. Kumaratilake, J.S., et al. 1989. The tissue distribution of microfibrils reacting with a monospecific antibody to MAGP, the major glycoprotein antigen of elastin-associated microfibrils. *Eur. J. Cell Biol.* 50: 117-127.
3. Gibson, M.A., et al. 1989. The protein components of the 12-nanometer microfibrils of elastic and nonelastic tissues. *J. Biol. Chem.* 264: 4590-4598.

CHROMOSOMAL LOCATION

Genetic locus: MFAP2 (human) mapping to 1p36.13; Mfap2 (mouse) mapping to 4 D3.

SOURCE

MAGP-1 (G-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 32-61 near the N-terminus of MAGP-1 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.

MAGP-1 (G-7) is available conjugated to agarose (sc-166075 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166075 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166075 PE), fluorescein (sc-166075 FITC), Alexa Fluor® 488 (sc-166075 AF488), Alexa Fluor® 546 (sc-166075 AF546), Alexa Fluor® 594 (sc-166075 AF594) or Alexa Fluor® 647 (sc-166075 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166075 AF680) or Alexa Fluor® 790 (sc-166075 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166075 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

MAGP-1 (G-7) is recommended for detection of MAGP-1 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).

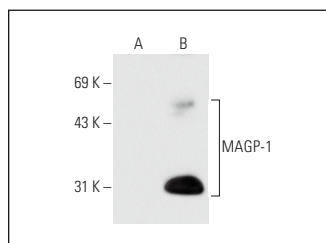
MAGP-1 (G-7) is also recommended for detection of MAGP-1 in additional species, including equine and porcine.

Suitable for use as control antibody for MAGP-1 siRNA (h): sc-60980, MAGP-1 siRNA (m): sc-60981, MAGP-1 shRNA Plasmid (h): sc-60980-SH, MAGP-1 shRNA Plasmid (m): sc-60981-SH, MAGP-1 shRNA (h) Lentiviral Particles: sc-60980-V and MAGP-1 shRNA (m) Lentiviral Particles: sc-60981-V.

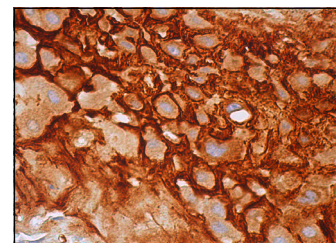
Molecular Weight of MAGP-1: 31 kDa.

Positive Controls: MAGP-1 (m): 293T Lysate: sc-125577 or mouse ovary extract: sc-2404.

DATA



MAGP-1 (G-7): sc-166075. Western blot analysis of MAGP-1 expression in non-transfected: sc-117752 (A) and mouse MAGP-1 transfected: sc-125577 (B) 293T whole cell lysates.



MAGP-1 (G-7): sc-166075. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of decidual cells and extracellular matrix staining.

SELECT PRODUCT CITATIONS

1. Mularczyk, E.J., et al. 2018. ADAMTS10-mediated tissue disruption in Weill-Marchesani syndrome. *Hum. Mol. Genet.* 27: 3675-3687.
2. Chen, W., et al. 2023. Pipeline 2for precise insoluble matrisome coverage in tissue extracellular matrices. *Front. Bioeng. Biotechnol.* 11: 1135936.

STORAGE

Store at 4° C, **DO 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 for detailed protocols and support products.