

MAGP-1 (E-8): sc-271518

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

- Gibson, M.A., et al. 1987. The immunohistochemical localisation of microfibril-associated glycoprotein (MAGP) in elastic and non-elastic tissues. *Immunol. Cell Biol.* 65: 345-356.
- 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.
- Kumaratillake, 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.
- Kobayashi, R., et al. 1989. Isolation and characterization of a new 36 kDa microfibril-associated glycoprotein from porcine aorta. *J. Biol. Chem.* 264: 17437-17444.
- Segade, F., et al. 2002. Identification of a matrix-binding domain in MAGP-1 and MAGP-2 and intracellular localization of alternative splice forms. *J. Biol. Chem.* 277: 11050-11057.
- Penner, A.S., et al. 2002. Microfibril-associated glycoprotein-2 interacts with fibrillin-1 and fibrillin-2 suggesting a role for MAGP-2 in elastic fiber assembly. *J. Biol. Chem.* 277: 35044-35049.
- Tsuruga, E., et al. 2005. Microfibril-associated glycoprotein-1 and fibrillin-2 are associated with tropoelastin deposition *in vitro*. *Int. J. Biochem. Cell Biol.* 37: 120-129.

CHROMOSOMAL LOCATION

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

SOURCE

MAGP-1 (E-8) is a mouse monoclonal antibody raised against amino acids 1-105 mapping at 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.

APPLICATIONS

MAGP-1 (E-8) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

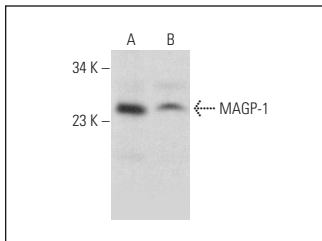
Molecular Weight of MAGP-1: 31 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, mouse ovary extract: sc-2404 or MAGP-1 (m): 293T Lysate: sc-125577.

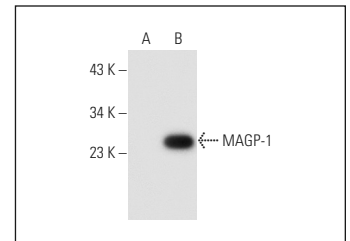
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MAGP-1 (E-8): sc-271518. Western blot analysis of MAGP-1 expression in mouse postnatal kidney tissue extract (A) and NIH/3T3 whole cell lysate (B).



MAGP-1 (E-8): sc-271518. 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.

SELECT PRODUCT CITATIONS

- Villain, G., et al. 2018. MAGP-1 and Fibronectin control EGFL7 functions by driving its deposition into distinct endothelial extracellular matrix locations. *FEBS J.* 285: 4394-4412.

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.