

ChM-1 (C-20): sc-20310

BACKGROUND

ChM-1 is a cartilage-specific matrix glycoprotein that stimulates the growth of chondrocytes. ChM-1 inhibits angiogenesis by disrupting the tube formation of endothelial cells and thus is responsible for the avascular nature of cartilage. ChM-1 is strongly expressed by the proliferating and hypertrophic zones in the epiphyseal plate of long bones. ChM-1 accumulates in the interterritorial matrix around the lacunae. During development, downregulation of ChM-1 permits angiogenesis and ultimately bone formation on the cartilage template. ChM-1 expression is downregulated in the presence of several growth factors including TGF β 2, FGF2 and PTHLH. ChM-1 expression may also play a role in the hypovascularity and chondroid formation of pleomorphic adenomas. The gene encoding human ChM-1 maps to chromosome 13q14.3.

REFERENCES

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- Hiraki, Y., Inoue, H., Iyama, K., Kamizono, A., Ochiai, M., Shukunami, C., Iijima, S., Suzuki, F. and Kondo, J. 1997. Identification of Chondromodulin-I as a novel endothelial cell growth inhibitor. Purification and its localization in the avascular zone of epiphyseal cartilage. *J. Biol. Chem.* 272: 32419-32426.
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- Shukunami, C., Iyama, K., Inoue, H. and Hiraki, Y. 1999. Spatiotemporal pattern of the mouse Chondromodulin-I gene expression and its regulatory role in vascular invasion into cartilage during endochondral bone formation. *Int. J. Dev. Biol.* 43: 39-49.

CHROMOSOMAL LOCATION

Genetic locus: LECT1 (human) mapping to 13q14.3; Lect1 (mouse) mapping to 14 D3.

SOURCE

ChM-1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ChM-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-20310 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ChM-1 (C-20) is recommended for detection of ChM-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

ChM-1 (C-20) is also recommended for detection of ChM-1 in additional species, including equine, canine, bovine and porcine.

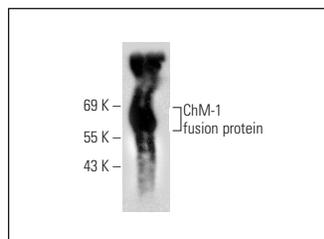
Suitable for use as control antibody for ChM-1 siRNA (h): sc-43279, ChM-1 siRNA (m): sc-43280, ChM-1 shRNA Plasmid (h): sc-43279-SH, ChM-1 shRNA Plasmid (m): sc-43280-SH, ChM-1 shRNA (h) Lentiviral Particles: sc-43279-V and ChM-1 shRNA (m) Lentiviral Particles: sc-43280-V.

Molecular Weight of ChM-1 precursor: 37 kDa.

Molecular Weight of secreted ChM-1: 25 kDa.

Positive Controls: U-2 OS cell lysate: sc-2295.

DATA



ChM-1 (C-20): sc-20310. Western blot analysis of human recombinant ChM-1 fusion protein.

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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **ChM-1 (H-10): sc-365693**, our highly recommended monoclonal alternative to ChM-1 (C-20).