

COL2A1 (1H1): sc-517571

BACKGROUND

The extensive family of COL gene products (collagens) is composed of several chain types, including fibril-forming interstitial collagens (types I, II, III and V) and basement membrane collagens (type IV), each type containing multiple isoforms. Collagens are fibrous, extracellular matrix proteins with high tensile strength and are the major components of connective tissue, such as tendons and cartilage. All collagens contain a triple helix domain and frequently show lateral self-association in order to form complex connective tissues. Several collagens also play a role in cell adhesion, important for maintaining normal tissue architecture and function. In cartilage, Collagen Type II constitutes the bulk of the fibril. Sensitization with Collagen Type II induces an erosive polyarthritis in rats, mice and higher primates which can resemble rheumatoid arthritis and relapsing polychondritis.

REFERENCES

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2. McCarthy, J.B., Vachhani, B. and Iida, J. 1996. Cell adhesion to collagenous matrices. *Biopolymers* 40: 371-381.
3. Engel, J. 1997. Versatile collagens in invertebrates. *Science* 277: 1785-1786.
4. Myers, L.K., Rosloniec, E.F., Cremer, M.A. and Kang, A.H. 1997. Collagen-induced arthritis, an animal model of autoimmunity. *Life Sci.* 61: 1861-1878.
5. Staines, N.A., Harper, N. and Ward, F.J. 1997. Nasal tolerance to dominant and subdominant epitopes of Collagen Type II and protection against collagen-induced arthritis. *Biochem. Soc. Trans.* 25: 661-664.
6. Cremer, M.A., Rosloniec, E.F. and Kang, A.H. 1998. The cartilage collagens: a review of their structure, organization and role in the pathogenesis of experimental arthritis in animals and in human rheumatic disease. *J. Mol. Med.* 76: 275-288.

CHROMOSOMAL LOCATION

Genetic locus: COL2A1 (human) mapping to 12q13.11; Col2a1 (mouse) mapping to 15 F1.

SOURCE

COL2A1 (1H1) is a mouse monoclonal antibody raised against Collagen α 1 Type II of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

COL2A1 (1H1) is recommended for detection of Collagen α 1 Type II of mouse, rat and human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for COL2A1 siRNA (h): sc-35081, COL2A1 siRNA (m): sc-35082, COL2A1 shRNA Plasmid (h): sc-35081-SH, COL2A1 shRNA Plasmid (m): sc-35082-SH, COL2A1 shRNA (h) Lentiviral Particles: sc-35081-V and COL2A1 shRNA (m) Lentiviral Particles: sc-35082-V.

Molecular Weight of COL2A1: 190 kDa.

SELECT PRODUCT CITATIONS

1. Luo, Y., Zhang, Y. and Huang Y. 2018. Icaritin reduces cartilage degeneration in a mouse model of osteoarthritis and is associated with the changes in expression of indian hedgehog and parathyroid hormone-related protein. *Med. Sci. Monit.* 24: 6695-6706.

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.