

COL2A1 (C-19): sc-7763

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

1. Bateman, J.F., et al. 1996. Collagen superfamily. In Comper, W.D., ed., Extracellular matrix, Vol. 2: molecular components and interactions. Amsterdam: Harwood Academic Publishers, 22-67.
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3. Engel, J. 1997. Versatile collagens in invertebrates. Science 277: 1785-1786.
4. Myers, L.K., et al. 1997. Collagen-induced arthritis, an animal model of autoimmunity. Life Sci. 61: 1861-1878.
5. Staines, N.A., et al. 1997. Nasal tolerance to dominant and subdominant epitopes of collagen type II and protection against collagen-induced arthritis. Biochem. Soc. Trans. 25: 661-664.

CHROMOSOMAL LOCATION

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

SOURCE

COL2A1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Collagen α 1 Type II 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-7763 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

COL2A1 (C-19) is recommended for detection of Collagen α 1 Type II of mouse, rat, human, *Xenopus laevis* and zebrafish 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).

COL2A1 (C-19) is also recommended for detection of Collagen α 1 Type II in additional species, including equine.

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.

Positive Controls: HISM cell lysate: sc-2229, CCD-1064Sk cell lysate: sc-2263 or ECV304 cell lysate: sc-2269.

SELECT PRODUCT CITATIONS

1. Hecht, J.T., et al. 2001. Calreticulin, PDI, Grp94 and BiP chaperone proteins are associated with retained COMP in pseudoachondroplasia chondrocytes. Matrix Biol. 20: 251-262.
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7. Blaise, R., et al. 2009. Involvement of the Notch pathway in the regulation of matrix metalloproteinase 13 and the dedifferentiation of articular chondrocytes in murine cartilage. Arthritis Rheum. 60: 428-439.
8. Wu, S., et al. 2011. Insulin resistance secondary to a high-fat diet stimulates longitudinal bone growth and growth plate chondrogenesis in mice. Endocrinology 152: 468-475.

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Try **COL2A1 (M2139): sc-52658**, our highly recommended monoclonal alternative to COL2A1 (C-19).