

COL2A1 (H-300): sc-28887

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.

CHROMOSOMAL LOCATION

Genetic locus: COL2A1 (human) mapping to 12q13.11, COL1A1 (human) mapping to 17q21.33; Col2a1 (mouse) mapping to 15 F1, Col1a1 (mouse) mapping to 11 D.

SOURCE

COL2A1 (H-300) is a rabbit polyclonal antibody raised against amino acids 873-1072 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.

APPLICATIONS

COL2A1 (H-300) is recommended for detection of Collagen α 1 Type II, and to a lesser extent, Collagen α 1 Type I 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), 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).

Molecular Weight of COL2A1: 190 kDa.

Positive Controls: COL1A1 (m): 293T Lysate: sc-125157, HeLa whole cell lysate: sc-2200 or HISM cell lysate: sc-2229.

STORAGE

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

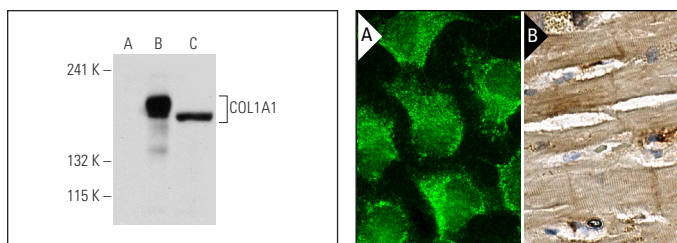
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



COL2A1 (H-300): sc-28887. Western blot analysis of COL1A1 expression in non-transfected 293T: sc-117752 (A), mouse COL1A1 transfected 293T: sc-125157 (B) and HeLa (C) whole cell lysates.

COL2A1 (H-300): sc-28887. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes (B).

SELECT PRODUCT CITATIONS

- Behr, B., et al. 2011. Craniosynostosis of coronal suture in twist1 mice occurs through endochondral ossification recapitulating the physiological closure of posterior frontal suture. *Front. Physiol.* 2: 37.
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- Liu, Y., et al. 2012. One-step derivation of mesenchymal stem cell (MSC)-like cells from human pluripotent stem cells on a fibrillar collagen coating. *PLoS ONE* 7: e33225.
- Suh, N., et al. 2012. Synthetic triterpenoids, CDDO-Imidazolide and CDDO-Ethyl amide, induce chondrogenesis. *Osteoarthritis Cartilage* 20: 446-450.
- Dogan, A., et al. 2012. Differentiation of human stem cells is promoted by amphiphilic pluronic block copolymers. *Int. J. Nanomedicine* 7: 4849-4860.
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- Schuchman, E.H., et al. 2013. Pentosan polysulfate: a novel therapy for the mucopolysaccharidoses. *PLoS ONE* 8: e54459.
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Try **COL2A1 (M2139): sc-52658**, our highly recommended monoclonal alternative to COL2A1 (H-300).