

COL1A1 (C-18): sc-8784

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.

CHROMOSOMAL LOCATION

Genetic locus: COL1A1 (human) mapping to 17q21.33; Col1a1 (mouse) mapping to 11 D.

SOURCE

COL1A1 (C-18) is available as either goat (sc-8784) or rabbit (sc-8784-R) polyclonal affinity purified antibody raised against a peptide mapping to the C-terminus of Collagen α 1 Type I of human origin.

PRODUCT

Each vial contains either 100 μ g (sc-8784) or 200 μ g (sc-8784-R) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8784 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COL1A1 (C-18) is recommended for detection of precursor and mature 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

COL1A1 (C-18) is also recommended for detection of precursor and mature Collagen α 1 Type I in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for COL1A1 siRNA (h): sc-44041, COL1A1 siRNA (m): sc-44044, COL1A1 shRNA Plasmid (h): sc-44041-SH, COL1A1 shRNA Plasmid (m): sc-44044-SH, COL1A1 shRNA (h) Lentiviral Particles: sc-44041-V and COL1A1 shRNA (m) Lentiviral Particles: sc-44044-V.

Molecular Weight of COL1A1 precursor: 140-210 kDa.

Molecular Weight of mature COL1A1: 70-90 kDa.

Positive Controls: Hs 732.Sk/Mu whole cell lysate, Hs68 cell lysate: sc-2230 or HOS cell lysate: sc-2275.

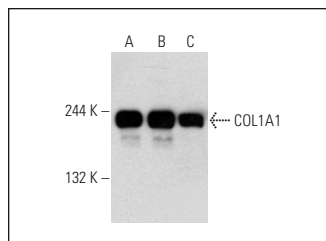
STORAGE

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

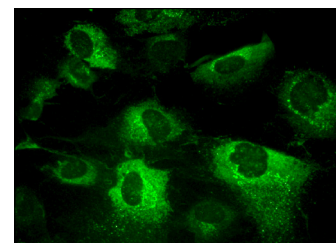
RESEARCH USE

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

DATA



COL1A1 (C-18)-R: sc-8784-R. Western blot analysis of COL1A1 expression in Hs 732.Sk/Mu (A), Hs68 (B) and HOS (C) whole cell lysates.



COL1A1 (C-18)-R: sc-8784-R. Immunofluorescence staining of methanol-fixed Hs68 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Leicht, M., et al. 2001. Serum depletion induces cell loss of rat cardiac fibroblasts and increased expression of extracellular matrix proteins in surviving cells. *Cardiovasc. Res.* 52: 429-437.
2. Hammerick, K.E., et al. 2010. Pulsed direct current electric fields enhance osteogenesis in adipose-derived stromal cells. *Tissue Eng. Part A* 16: 917-931.
3. Liu, X., et al. 2010. Trimetazidine inhibits pressure overload-induced cardiac fibrosis through NADPH oxidase-ROS-CTGF pathway. *Cardiovasc. Res.* 88: 150-158.
4. Lui, P.P., et al. 2010. Sustained expression of proteoglycans and collagen type III/type I ratio in a calcified tendinopathy model. *Rheumatology* 49: 231-239.
5. Yin, H., et al. 2011. Ginsenoside-Rg1 enhances angiogenesis and ameliorates ventricular remodeling in a rat model of myocardial infarction. *J. Mol. Med.* 89: 363-375.
6. Eliyahu, E., et al. 2011. Anti-TNF α therapy enhances the effects of enzyme replacement therapy in rats with mucopolysaccharidosis type VI. *PLoS ONE* 6: e22447.
7. Csomor, P., et al. 2011. No evidence for disturbed COL1A1 and A2 expression in otosclerosis. *Eur. Arch. Otorhinolaryngol.* 269: 2043-2051.
8. Zhu, J. and Carver, W. 2012. Effects of interleukin-33 on cardiac fibroblast gene expression and activity. *Cytokine* 58: 368-379.
9. Furusawa, K., et al. 2012. Studies on the formation mechanism and the structure of the anisotropic collagen gel prepared by dialysis-induced anisotropic gelation. *Biomacromolecules* 13: 29-39.

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Try **COL1A1 (3G3): sc-293182**, our highly recommended monoclonal alternative to COL1A1 (C-18).