

COL3A1 (C-6): sc-514601

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: COL3A1 (human) mapping to 2q32.2; Col3a1 (mouse) mapping to 1 C1.1.

SOURCE

COL3A1 (C-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1163-1182 near the C-terminus of Collagen $\alpha 1$ Type III of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-514601 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

COL3A1 (C-6) is recommended for detection of Collagen $\alpha 1$ Type III of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for COL3A1 siRNA (h): sc-43062, COL3A1 siRNA (m): sc-43063, COL3A1 shRNA Plasmid (h): sc-43062-SH, COL3A1 shRNA Plasmid (m): sc-43063-SH, COL3A1 shRNA (h) Lentiviral Particles: sc-43062-V and COL3A1 shRNA (m) Lentiviral Particles: sc-43063-V.

Molecular Weight of COL3A1 isoforms: 110/140 kDa.

Positive Controls: JAR cell lysate: sc-2276, 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.

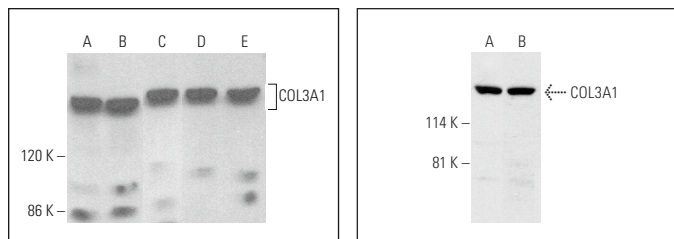
PROTOCOLS

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

RESEARCH USE

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

DATA



COL3A1 (C-6): sc-514601. Western blot analysis of COL3A1 expression in JAR (A), HeLa (B), HEL 92.1.7 (C), NIH/3T3 (D) and KNRK (E) whole cell lysates.

COL3A1 (C-6): sc-514601. Western blot analysis of COL3A1 expression in HISM (A) and JAR (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Zhou, R., et al. 2015. Aberrant miR-21 and miR-200b expression and its pro-fibrotic potential in hypertrophic scars. *Exp. Cell Res.* 339: 360-366.
- Zhou, R., et al. 2017. MiR-21 promotes collagen production in keloid via Smad7. *Burns* 43: 555-561.
- Xu, W., et al. 2018. MiR-29 family inhibits resistance to methotrexate and promotes cell apoptosis by targeting COL3A1 and MCL1 in osteosarcoma. *Med. Sci. Monit.* 24: 8812-8821.
- Zhao, F., et al. 2019. Decreased collagen type III synthesis in skin fibroblasts is associated with parastomal hernia following colostomy. *Int. J. Mol. Med.* 44: 1609-1618.
- Sun, W.Y., et al. 2020. β -arrestin2 deficiency protects against hepatic fibrosis in mice and prevents synthesis of extracellular matrix. *Cell Death Dis.* 11: 389.
- Tang, Y., et al. 2021. Chronic colitis upregulates microRNAs suppressing brain-derived neurotrophic factor in the adult heart. *PLoS ONE* 16: e0257280.
- Graziano, A.C.E., et al. 2021. Adaption of lung fibroblasts to fluoro-edenite fibers: evaluation of molecular and physiological dynamics. *Cell. Physiol. Biochem.* 55: 327-343.
- Zhou, X., et al. 2022. Deciphering the spatial-temporal transcriptional landscape of human hypothalamus development. *Cell Stem Cell* 29: 328-343.e5.
- Lee, J.E. and Boo, Y.C. 2022. Combination of glycnamide and ascorbic acid synergistically promotes collagen production and wound healing in human dermal fibroblasts. *Biomedicine* 10: 1029.

CONJUGATES

See **COL3A1 (B-10): sc-271249** for COL3A1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.