

# COL1A (COL-1): sc-59772

## 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

COL1A (COL-1) is a mouse monoclonal antibody raised against full length native Collagen Type I of bovine origin.

## PRODUCT

Each vial contains 100 µl ascites containing IgG<sub>1</sub> with < 0.1% sodium azide.

## APPLICATIONS

COL1A (COL-1) is recommended for detection of native Collagen Type I of mouse, rat and human origin by Western Blotting (non-reducing) (starting dilution to be determined by researcher, dilution range 1:100-1:1000), immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:500), immunohistochemistry (frozen) (starting dilution to be determined by researcher, dilution range 1:500-1:2000) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:30-1:3000); non cross-reactive with Collagen Types II, III, IV, V, VI, VII, IX, X and XI; may cross-react with connective tissue fibers in acetone-fixed or unfixed frozen sections.

COL1A (COL-1) is also recommended for detection of native Collagen Type I in additional species, including bovine, porcine, feline and canine.

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 Collagen Type I precursor: 130-140 kDa.

Molecular Weight of mature Collagen Type I: 70-90 kDa.

Positive Controls: Hs68 cell lysate: sc-2230, CCD-1064Sk cell lysate: sc-2263 or FHs 173We cell lysate: sc-2417.

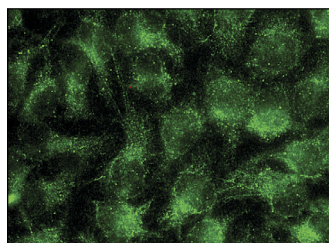
## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## RESEARCH USE

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

## DATA



COL1A (COL-1): sc-59772. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cytoplasmic localization.

## PRODUCT CITATIONS

- Dooley, S., et al. 2008. Hepatocyte-specific Smad7 expression attenuates TGF- $\beta$ -mediated fibrogenesis and protects against liver damage. *Gastroenterology* 135: 642-659.
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- Kim, Y.M., et al. 2016. Anti-wrinkle effects of a tuna heart H<sub>2</sub>O fraction on Hs27 human fibroblasts. *Int. J. Mol. Med.* 37: 92-98.
- Yang, X., et al. 2017. Salvianolic acid B regulates gene expression and promotes cell viability in chondrocytes. *J. Cell. Mol. Med.* 21: 1835-1847.
- You, S., et al. 2018. An Aza resveratrol-chalcone derivative 6b protects mice against diabetic cardiomyopathy by alleviating inflammation and oxidative stress. *J. Cell. Mol. Med.* 22: 1931-1943.
- Radhakrishnan, S., et al. 2019. Effect of passaging on the stemness of infrapatellar fat pad-derived stem cells and potential role of nucleostemin as a prognostic marker of impaired stemness. *Mol. Med. Rep.* 20: 813-829.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.