

Pro-COL1A1 (N-17): sc-8782

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.

REFERENCES

1. Bellamy, G., et al. 1971. Evidence for procollagen, a biosynthetic precursors of collagen. Proc. Natl. Acad. Sci. USA 68: 1138-1142.
2. Church, R.L., et al. 1971. Collagen biosynthesis: synthesis and secretion of a high molecular weight collagen precursor (procollagen). Proc. Natl. Acad. Sci. USA 68: 2638-2642.

CHROMOSOMAL LOCATION

Genetic locus: COL1A1 (human) mapping to 17q21.33.

SOURCE

Pro-COL1A1 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Procollagen $\alpha 1$ Type I of human origin.

PRODUCT

Each vial contains 100 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-8782 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Pro-COL1A1 (N-17) is recommended for detection of Collagen $\alpha 1$ Type1 precursor of 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).

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

Molecular Weight of Pro-COL1A1 precursor: 140-210 kDa.

Positive Controls: Hs68 cell lysate: sc-2230, CCD-1064Sk cell lysate: sc-2263 or HOS cell lysate: sc-2275.

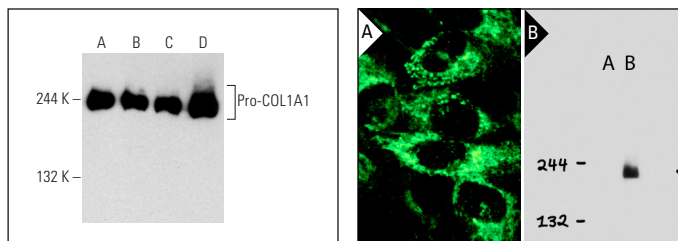
RESEARCH USE

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

STORAGE

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

DATA



Pro-COL1A1 (N-17): sc-8782. Western blot analysis of Pro-COL1A1 expression in CCD-1064Sk (A), Hs 732.Sk/Mu (B), HOS (C) and Hs68 (D) whole cell lysates.

Pro-COL1A1 (N-17): sc-8782. Immunofluorescence staining of methanol-fixed Hs68 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing extracellular localization (B).

SELECT PRODUCT CITATIONS

1. Schultze-Mosgau, S., et al. 2006. Plasminogen activator inhibitor-I-related regulation of procollagen I ($\alpha 1$ and $\alpha 2$) by antitransforming growth factor- $\beta 1$ treatment during radiation-impaired wound healing. Int. J. Radiat. Oncol. Biol. Phys. 64: 280-288.
2. Bobryshev, Y.V., et al. 2008. Spatial distribution of osteoblast-specific transcription factor Cbfa1 and bone formation in atherosclerotic arteries. Cell Tissue Res. 333: 225-235.
3. Wehrhan, F., et al. 2010. Skin repair using a porcine collagen I/III membrane-vascularization and epithelization properties. Dermatol. Surg. 36: 919-930.
4. Wen, K.C., et al. 2012. *Ixora parviflora* protects against UVB-induced photoaging by inhibiting the expression of MMPs, MAP Kinases, and COX-2 and by promoting Type I procollagen synthesis. Evid. Based Complement. Alternat. Med. 2012: 417346.

PROTOCOLS

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Try **COL1A1 (3G3): sc-293182**, our highly recommended monoclonal alternative to Pro-COL1A1 (N-17).