

COL3A1 (S-17)-R: sc-8780-R

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. Bateman, J.F., et al. 1996. Collagen Superfamily. In Comper, W.D., ed., Extracellular Matrix, Vol. 2: Molecular Components and Interactions. Amsterdam: Harwood Academic Publishers, 22-67.
2. McCarthy, J.B., et al. 1996. Cell adhesion to collagenous matrices. Biopolymers 40: 371-381.
3. Engel, J. 1997. Versatile collagens in invertebrates. Science 277: 1785-1786.

CHROMOSOMAL LOCATION

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

SOURCE

COL3A1 (S-17)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping N-terminus of Collagen $\alpha 1$ Type III 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-8780-R P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COL3A1 (S-17)-R is recommended for detection of Collagen $\alpha 1$ Type III 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).

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.

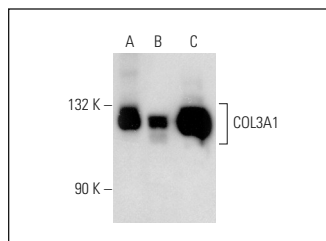
Molecular Weight of COL3A1 isoforms: 110/140 kDa.

Positive Controls: COL3A1 (h): 293T Lysate: sc-114750, Hs68 cell lysate: sc-2230 or AN3 CA cell lysate: sc-24662.

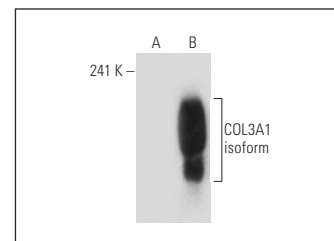
STORAGE

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

DATA



COL3A1 (S-17)-R: sc-8780-R. Western blot analysis of COL3A1 expression in Hs68 (A), HeLa (B) and AN3 CA (C) whole cell lysates.



COL3A1 (S-17)-R: sc-8780-R. Western blot analysis of COL3A1 expression in non-transfected: sc-114752 (A) and human COL3A1 isoform 2 transfected: sc-114750 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Fujigaki, Y., et al. 2002. Mechanisms and kinetics of Bowman's epithelial-myofibroblast transdifferentiation in the formation of glomerular crescents. Nephron 92: 203-212.
2. 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.
3. Tada, Y., et al. 2010. Characterization of cardiac size and function in SHRSP2-Lepr(fa)/lzmDmcr rats, a new animal model of metabolic syndrome. Biol. Pharm. Bull. 33: 1971-1976.
4. Voloshenyuk, T.G., et al. 2011. Induction of cardiac fibroblast lysyl oxidase by TGF- β 1 requires PI3K/Akt, Smad3, and MAPK signaling. Cytokine 55: 90-97.
5. Ni, M., et al. 2013. Engineered scaffold-free tendon tissue produced by tendon-derived stem cells. Biomaterials 34: 2024-2037.
6. Al-Qattan, M.M., et al. 2013. Salamander-derived, human-optimized nAG protein suppresses collagen synthesis and increases collagen degradation in primary human fibroblasts. Biomed Res. Int. 2013: 384091.
7. Tan, H.T., et al. 2015. Unravelling the proteome of degenerative human mitral valves. Proteomics 15: 2934-2944.

RESEARCH USE

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



Try **COL3A1 (B-10): sc-271249** or **COL3A1 (C-6): sc-514601**, our highly recommended monoclonal alternatives to COL3A1 (S-17). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **COL3A1 (B-10): sc-271249**.