

COL3A1 (C-15): sc-8781

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 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-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-8781 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COL3A1 (C-15) 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.

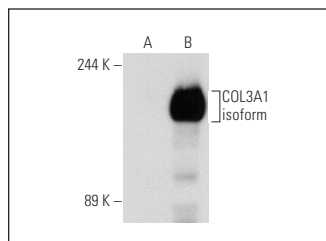
Molecular Weight of COL3A1 isoforms: 110/140 kDa.

Positive Controls: COL3A1 (h): 293T Lysate: sc-114750, CCD-1064Sk cell lysate: sc-2263 or Hs68 cell lysate: sc-2230.

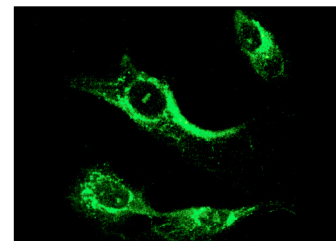
STORAGE

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

DATA



COL3A1 (C-15): sc-8781. Western blot analysis of COL3A1 expression in non-transfected: sc-117752 (A) and human COL3A1 isoform 2 transfected: sc-114750 (B) 293T whole cell lysates.



COL3A1 (C-15): sc-8781. Immunofluorescence staining of methanol-fixed Hs68 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Dubay, D.A., et al. 2004. Fascial fibroblast kinetic activity is increased during abdominal wall repair compared to dermal fibroblasts. Wound Repair Regen. 12: 539-545.
2. Guo, X., et al. 2004. Wnt/ β -catenin signaling is sufficient and necessary for synovial joint formation. Genes Dev. 18: 2404-2417.
3. Lu, J., et al. 2013. Interferon regulatory factor 3 is a negative regulator of pathological cardiac hypertrophy. Basic Res. Cardiol. 108: 326.
4. Manrique, C., et al. 2013. Obesity and insulin resistance induce early development of diastolic dysfunction in young female mice fed a Western diet. Endocrinology 154: 3632-3642.
5. Latella, G., et al. 2013. Localization of $\alpha v \beta 6$ integrin-TGF- $\beta 1$ /Smad3, mTOR and PPAR γ in experimental colorectal fibrosis. Eur. J. Histochem. 57: e40.
6. Wang, Q., et al. 2014. Dietary capsaicin ameliorates pressure overload-induced cardiac hypertrophy and fibrosis through the transient receptor potential vanilloid type 1. Am. J. Hypertens. 27: 1521-1529.
7. Xiu, L., et al. 2015. Intracellular sphingosine 1-phosphate contributes to collagen expression of hepatic myofibroblasts in human liver fibrosis independent of its receptors. Am. J. Pathol. 185: 387-398.

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 (C-15). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **COL3A1 (B-10): sc-271249**.