

COL1A1 (3G3): sc-293182



The Power to Question

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

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CHROMOSOMAL LOCATION

Genetic locus: COL1A1 (human) mapping to 17q21.33; Col1a1 (mouse) mapping to 11 D.

SOURCE

COL1A1 (3G3) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1021-1108 of Collagen α 1 Type I of human origin.

PRODUCT

Each vial contains 100 μ g IgG₃ kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

COL1A1 (3G3) is recommended for detection of Collagen α 1 Type I 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), 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 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 COL1A1 precursor: 140-210 kDa.

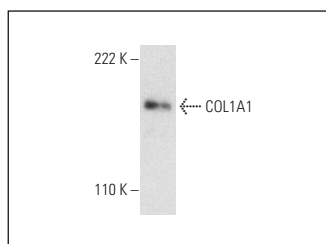
Molecular Weight of mature COL1A1: 70-90 kDa.

Positive Control: Hs 732.Sk/Mu whole cell lysate: sc-364362.

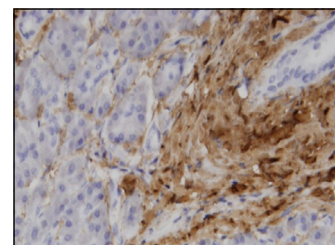
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



COL1A1 (3G3): sc-293182. Western blot analysis of COL1A1 expression in Hs 732.Sk/Mu whole cell lysate.



COL1A1 (3G3): sc-293182. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

- Zhou, N., et al. 2016. BMP2 induces chondrogenic differentiation, osteogenic differentiation and endochondral ossification in stem cells. Cell Tissue Res. 366: 101-111.

RESEARCH USE

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