SANTA CRUZ BIOTECHNOLOGY, INC.

COL1A1 (D-13): sc-25974

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BIOTECHNOLOGY

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.

CHROMOSOMAL LOCATION

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

SOURCE

COL1A1 (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of the mature chain of Collagen α1 Type I of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-25974 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COL1A1 (D-13) is recommended for detection of Collagen α1 Type I of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

COL1A1 (D-13) is also recommended for detection of Collagen α1 Type I in additional species, including equine, canine, bovine and avian.

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 Controls: Hs68 cell lysate: sc-2230, CCD-1064Sk cell lysate: sc-2263 or Hs 732.Sk/Mu whole cell lysate: sc-364362.
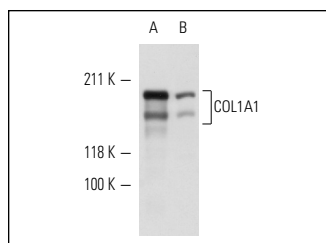
STORAGE

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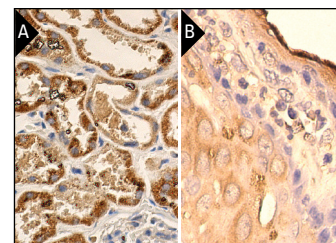
RESEARCH USE

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

DATA

COL1A1 (D-13): sc-25974. Western blot analysis of COL1A1 expression in Hs68 (**A**) and Hs 732.Sk/Mu (**B**) whole cell lysates.

COL1A1 (D-13): sc-25974. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gastric carcinoma tissue showing cytoplasmic staining (**B**).

SELECT PRODUCT CITATIONS

1. Bandapalli, O.R., et al. 2006. Global analysis of host tissue gene expression in the invasive front of colorectal liver metastases. Int. J. Cancer 118: 74-89.

2. Karaoz, E., et al. 2010. Isolation and characterization of stem cells from pancreatic islet: pluripotency, differentiation potential and ultrastructural characteristics. Cytotherapy 12: 288-302.

3. Karaoz, E., et al. 2010. Pancreatic islet derived stem cells can express co-stimulatory molecules of antigen-presenting cells. Transplant. Proc. 42: 3663-3670.

4. Karaöz, E., et al. 2011. Human dental pulp stem cells demonstrate better neural and epithelial stem cell properties than bone marrow-derived mesenchymal stem cells. Histochem. Cell Biol. 136: 455-473.

5. Adas, G., et al. 2011. Mesenchymal stem cells improve the healing of ischemic colonic anastomoses (experimental study). Langenbecks Arch. Surg. 396: 115-126.

6. Karaoz, E., et al. 2012. Reduction of lesion in injured rat spinal cord and partial functional recovery of motility after bone marrow derived mesenchymal stem cell transplantation. Turk. Neurosurg. 22: 207-217.

7. Preobrazhenska, O., et al. 2012. Regional heterogeneity in murine lung fibroblasts from normal mice or mice exposed once to cigarette smoke. PLoS ONE 7: e39761.

8. Sahin, H., et al. 2012. Impaired biomechanical properties correlate with neoangiogenesis as well as VEGF and MMP-3 expression during rat patellar tendon healing. J. Orthop. Res. 30: 1952-1957.

MONOS
Satisfation
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Try **COL1A1 (3G3): sc-293182**, our highly recommended monoclonal alternative to COL1A1 (D-13).