SANTA CRUZ BIOTECHNOLOGY, INC.

Pro-COL3A1 (B-4): sc-166316

SANTA CRUZ 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: COL3A1 (human) mapping to 2q32.2; Col3a1 (mouse) mapping to 1 C1.1.

SOURCE

Pro-COL3A1 (B-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 30-54 near the N-terminus of Procollagen α1 Type III of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166316 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Pro-COL3A1 (B-4) is recommended for detection of Collagen α1 Type III precursor of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Pro-COL3A1 (B-4) is also recommended for detection of Collagen α1 Type III precursor in additional species, including equine, canine, bovine and porcine.

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 (predicted) of Pro-COL3A1: 140 kDa.

Molecular Weight (observed) of Pro-COL3A1: 215 kDa.

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

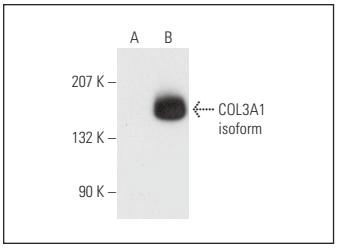
STORAGE

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

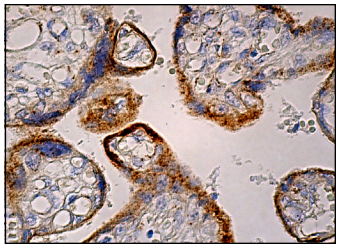
RESEARCH USE

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

DATA



Pro-COL3A1 (B-4): sc-166316. 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.



Pro-COL3A1 (B-4): sc-166316. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells.

SELECT PRODUCT CITATIONS

1. Georgiev, G.P., et al. 2019. A comparative study of the epiligament of the medial collateral and the anterior cruciate ligament in the human knee. Immunohistochemical analysis of collagen type I and V and procollagen type III. Ann. Anat. 224: 88-96.
2. Cho, C.S., et al. 2019. Concurrent activation of growth factor and nutrient arms of mTORC1 induces oxidative liver injury. Cell Discov. 5: 60.
3. Shi, Y., et al. 2020. Reduced expression of METTL3 promotes metastasis of triple-negative breast cancer by m^6A methylation-mediated COL3A1 up-regulation. Front. Oncol. 10: 1126.
4. Lamparelli, E.P., et al. 2022. 3D *in-vitro* cultures of human bone marrow and Wharton's jelly derived mesenchymal stromal cells show high chondrogenic potential. Front. Bioeng. Biotechnol. 10: 986310.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **COL3A1 (B-10): sc-271249** for COL3A1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.