SANTA CRUZ BIOTECHNOLOGY, INC.

Pro-COL1A2 (D-6): sc-166572

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: COL1A2 (human) mapping to 7q21.3; Col1a2 (mouse) mapping to 6 A1.

SOURCE

Pro-COL1A2 (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 15-50 at the N-terminus of Procollagen α2 Type I of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Pro-COL1A2 (D-6) is available conjugated to agarose (sc-166572 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166572 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166572 PE), fluorescein (sc-166572 FITC), Alexa Fluor® 488 (sc-166572 AF488), Alexa Fluor® 546 (sc-166572 AF546), Alexa Fluor® 594 (sc-166572 AF594) or Alexa Fluor® 647 (sc-166572 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166572 AF680) or Alexa Fluor® 790 (sc-166572 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166572 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Pro-COL1A2 (D-6) is recommended for detection of Pro-COL1A2 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).

Suitable for use as control antibody for COL1A2 siRNA (h): sc-72156, COL1A2 siRNA (m): sc-43061, COL1A2 shRNA Plasmid (h): sc-72156-SH, COL1A2 shRNA Plasmid (m): sc-43061-SH, COL1A2 shRNA (h) Lentiviral Particles: sc-72156-V and COL1A2 shRNA (m) Lentiviral Particles: sc-43061-V.

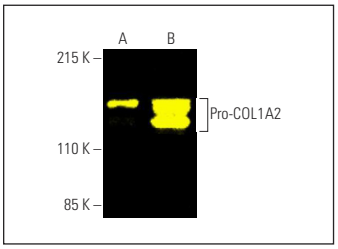
Molecular Weight of Pro-COL1A2: 140-210 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260, Hs68 cell lysate: sc-2230 or CCD-1064Sk cell lysate: sc-2263.

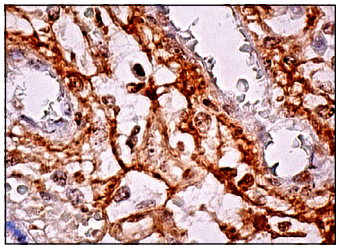
STORAGE

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

DATA



Pro-COL1A2 (D-6) Alexa Fluor® 488: sc-166572 AF488. Direct fluorescent western blot analysis of Pro-COL1A2 expression in CCD-1064Sk (**A**) and WI-38 (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



Pro-COL1A2 (D-6): sc-166572. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing showing extracellular staining.

SELECT PRODUCT CITATIONS

1. Kurundkar, A.R., et al. 2016. The matricellular protein CCN1 enhances TGF-β1/Smad3-dependent profibrotic signaling in fibroblasts and contributes to fibrogenic responses to lung injury. FASEB J. 30: 2135-2150.
2. Lu, Y., et al. 2017. Correlations between mitofusin 2 expression in fibroblasts and pelvic organ prolapse: an *in vitro* study. Chin. Med. J. 130: 2951-2959.
3. Walsh, D.R., et al. 2018. Regional mechanical and biochemical properties of the porcine cortical meninges. Acta Biomater. 80: 237-246.
4. Wang, X., et al. 2019. Mitofusin2 regulates the proliferation and function of fibroblasts: the possible mechanisms underlying pelvic organ prolapse development. Mol. Med. Rep. 20: 2859-2866.
5. Gissi, C., et al. 2020. Extracellular vesicles from rat-bone-marrow mesenchymal stromal/stem cells improve tendon repair in rat Achilles tendon injury model in dose-dependent manner: a pilot study. PLoS ONE 15: e0229914.
6. Ónody, A., et al. 2021. Interleukin-24 regulates mucosal remodeling in inflammatory bowel diseases. J. Transl. Med. 19: 237.
7. Wang, X., et al. 2022. Treatment of pelvic organ prolapse by the down-regulation of the expression of mitofusin 2 in uterosacral ligament tissue via mesenchymal stem cells. Genes 13: 829.
8. D'Alessandro, R., et al. 2022. Abiotic stresses elicitation potentiates the productiveness of cardoon calli as bio-factories for specialized metabolites production. Antioxidants 11: 1041.
9. Szász, C., et al. 2023. Optimization of sirius red-based microplate assay to investigate collagen production *in vitro*. Int. J. Mol. Sci. 24: 17435.

RESEARCH USE

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