

# COL1A2 (G-4): sc-166865

## 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.

## SOURCE

COL1A2 (G-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1050-1087 at the C-terminus of Collagen  $\alpha 2$  Type I of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgM 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-166865 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

COL1A2 (G-4) is recommended for detection of Collagen  $\alpha 2$  Type I of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 COL1A2 siRNA (h): sc-72156, COL1A2 shRNA Plasmid (h): sc-72156-SH and COL1A2 shRNA (h) Lentiviral Particles: sc-72156-V.

Molecular Weight of COL1A2 precursor: 130-140 kDa.

Molecular Weight of mature COL1A2: 70-90 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263, Hs68 cell lysate: sc-2230 or HCT-116 whole cell lysate: sc-364175.

## STORAGE

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

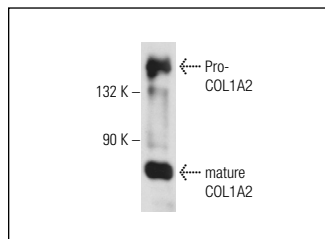
## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

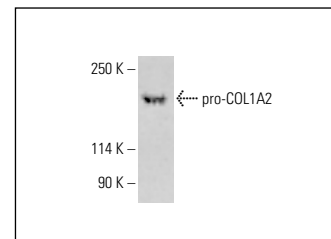
## RESEARCH USE

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

## DATA



COL1A2 (G-4): sc-166865. Western blot analysis of COL1A2 expression in CCD-1064Sk whole cell lysate.



COL1A2 (G-4): sc-166865. Western blot analysis of COL1A2 expression in HCT-116 whole cell lysate. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

## SELECT PRODUCT CITATIONS

1. Csomor, P., et al. 2012. No evidence for disturbed COL1A1 and A2 expression in otosclerosis. *Eur. Arch. Otorhinolaryngol.* 269: 2043-2051.
2. Sun, J., et al. 2015. Role of bone morphogenetic protein-2 in osteogenic differentiation of mesenchymal stem cells. *Mol. Med. Rep.* 12: 4230-4237.
3. Tamilzhalagan, S., et al. 2017. Amplified 7q21-22 gene MCM7 and its intronic miR-25 suppress COL1A2 associated genes to sustain intestinal gastric cancer features. *Mol. Carcinog.* 56: 1590-1602.
4. Goetzke, R., et al. 2018. Does soft really matter? Differentiation of induced pluripotent stem cells into mesenchymal stromal cells is not influenced by soft hydrogels. *Biomaterials* 156: 147-158.
5. Bravo-Santano, N., et al. 2019. Identification of novel targets for host-directed therapeutics against intracellular *Staphylococcus aureus*. *Sci. Rep.* 9: 15435.
6. Yang, H.H., et al. 2020. N-butyridenephthalide inhibits the phenotypic switch of VSMCs through activation of AMPK and prevents stenosis in an arteriovenous fistula rat model. *Int. J. Mol. Sci.* 21: 7403.
7. Yao, J., et al. 2021. lncRNA-HEIM facilitated liver fibrosis by up-regulating TGF- $\beta$  expression in long-term outcome of chronic hepatitis B. *Front. Immunol.* 12: 666370.
8. Al-Hasani, J., et al. 2022. Zyxin protects from hypertension-induced cardiac dysfunction. *Cell. Mol. Life Sci.* 79: 93.
9. Hassan, A., et al. 2023. Differential regulation of POC5 by ER $\alpha$  in human normal and scoliotic cells. *Genes* 14: 1111.
10. Kim, M., et al. 2024. The potential of enamel matrix derivative in countering bisphosphonate-induced effects in osteoblasts. *Life* 14: 1088.



See **COL1A2 (E-6): sc-393573** for COL1A2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.