

COL6A1 (H-200): sc-20649

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

1. Bateman, J.F., et al. 1996. In Comper, W.D., ed. Extracellular Matrix. Amsterdam: Harwood 2: 22-67.
2. McCarthy, J.B., et al. 1996. Cell adhesion to collagenous matrices. Biopolymers 40: 371-381.

CHROMOSOMAL LOCATION

Genetic locus: COL6A1 (human) mapping to 21q22.3; Col6a1 (mouse) mapping to 10 C1.

SOURCE

COL6A1 (H-200) is a rabbit polyclonal antibody raised against amino acids 51-250 mapping near the N-terminus of collagen $\alpha 1$ Type VI of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

COL6A1 (H-200) is recommended for detection of Collagen $\alpha 1$ Type VI 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).

COL6A1 (H-200) is also recommended for detection of Collagen $\alpha 1$ Type VI in additional species, including equine and bovine.

Suitable for use as control antibody for COL6A1 siRNA (h): sc-35085, COL6A1 siRNA (m): sc-35086, COL6A1 shRNA Plasmid (h): sc-35085-SH, COL6A1 shRNA Plasmid (m): sc-35086-SH, COL6A1 shRNA (h) Lentiviral Particles: sc-35085-V and COL6A1 shRNA (m) Lentiviral Particles: sc-35086-V.

Molecular Weight of COL6A1: 140 kDa.

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

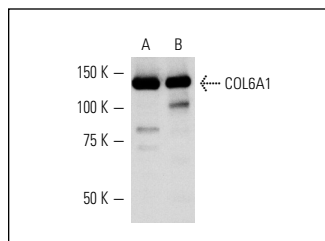
RESEARCH USE

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

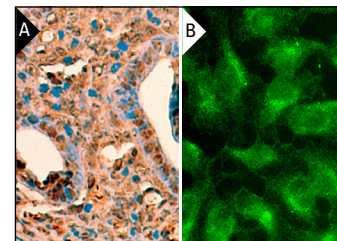
STORAGE

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

DATA



COL6A1 (H-200): sc-20649. Western blot analysis of COL6A1 expression in CCD-1064Sk (A) and Hs 732 Sk/Mu (B) whole cell lysates.



COL6A1 (H-200): sc-20649. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse uterus tissue showing extracellular matrix and nuclear localization (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

1. Xing, L., et al. 2007. Faithful tissue-specific expression of the human chromosome 21-linked COL6A1 gene in BAC-transgenic mice. Mamm. Genome 18: 113-122.
2. Bovolenta, M., et al. 2010. Identification of a deep intronic mutation in the COL6A2 gene by a novel custom oligonucleotide CGH array designed to explore allelic and genetic heterogeneity in collagen VI-related myopathies. BMC Med. Genet. 11: 44.
3. Zanoteli, E., et al. 2010. Muscle degeneration in neuraminidase 1-deficient mice results from infiltration of the muscle fibers by expanded connective tissue. Biochim. Biophys. Acta 1802: 659-672.
4. Ferlin, A., et al. 2011. Profiling Insulin like factor 3 (INSL3) signaling in human osteoblasts. PLoS ONE 6: e29733.
5. Xu, L., et al. 2011. Intact pericellular matrix of articular cartilage is required for unactivated discoidin domain receptor 2 in the mouse model. Am. J. Pathol. 179: 1338-1346.
6. Sabatelli, P., et al. 2012. Expression of collagen VI $\alpha 5$ and $\alpha 6$ chains in human muscle and in Duchenne muscular dystrophy-related muscle fibrosis. Matrix Biol. 31: 187-196.
7. Orioli, D., et al. 2013. XPD mutations in trichothiodystrophy hamper collagen VI expression and reveal a role of TFIIF in transcription derepression. Hum. Mol. Genet. 22: 1061-1073.

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Try **COL6A1 (B-4): sc-377143** or **COL6A1 (F-8): sc-398976**, our highly recommended monoclonal alternatives to COL6A1 (H-200).