SANTA CRUZ BIOTECHNOLOGY, INC.

COL6A2 (H-300): sc-292186

BACKGROUND

Collagens (COLs) are fibrous, extracellular matrix proteins with high tensile strength that function as the major components of connective tissue, such as tendons and cartilage. All COL proteins contain a triple helix domain and frequently show lateral self-association in order to form complex connective tissues. There are several types of COL proteins, including fibril-forming interstitial COLs (types I, II, III and V), basement membrane COLs (type IV) and beaded filament COLs (type VI). COL6A2 (collagen, type VI, α 2), also known as PP3610, is a 1,019 amino acid secreted protein that contains 3 VWFA domains and functions as the second of 3 α chains that comprise the type VI COL protein complex. Existing as a trimer with two other type VI α proteins, COL6A2 acts as a cell-binding protein that plays an important role in the organization of matrix components. Defects in the gene encoding COL6A2 are associated with bethlem myopathy (BM) and Ullrich congenital muscular dystrophy (UCMD). Multiple isoforms of COL6A2 exist due to alternative splicing events.

REFERENCES

1. Chu, M.L., et al. 1987. Characterization of three constituent chains of collagen type VI by peptide sequences and cDNA clones. Eur. J. Biochem. 168: 309-317.
2. Chu, M.L., et al. 1989. Sequence analysis of α 1(VI) and α 2(VI) chains of human type VI collagen reveals internal triplication of globular domains similar to the A domains of von Willebrand factor and two α 2(VI) chain variants that differ in the carboxy-terminus. EMBO J. 8: 1939-1946.
3. Saitta, B., et al. 1990. Alternative splicing of the human α 2(VI) collagen gene generates multiple mRNA transcripts which predict three protein variants with distinct carboxyl-termini. J. Biol. Chem. 265: 6473-6480.
4. Saitta, B., et al. 1991. The exon organization of the triple-helical coding regions of the human α 1(VI) and α 2(VI) collagen genes is highly similar. Genomics 11: 145-153.
5. Saitta, B., et al. 1992. Human α 2(VI) collagen gene. Heterogeneity at the 5'-untranslated region generated by an alternate exon. J. Biol. Chem. 267: 6188-6196.

CHROMOSOMAL LOCATION

Genetic locus: COL6A2 (human) mapping to 21q22.3; Col6a2 (mouse) mapping to 10 C1.

SOURCE

COL6A2 (H-300) is a rabbit polyclonal antibody raised against amino acids 241-540 mapping within an internal region of COL6A2 of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

COL6A2 (H-300) is recommended for detection of COL6A2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for COL6A2 siRNA (h): sc-91429, COL6A2 siRNA (m): sc-142473, COL6A2 shRNA Plasmid (h): sc-91429-SH, COL6A2 shRNA Plasmid (m): sc-142473-SH, COL6A2 shRNA (h) Lentiviral Particles: sc-91429-V and COL6A2 shRNA (m) Lentiviral Particles: sc-142473-V.

Molecular Weight of COL6A2: 109 kDa.

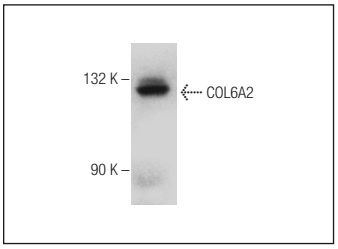
Molecular Weight glycosylated COL6A2: 120-160 kDa.

Positive Controls: COL6A2 (h2): 293T Lysate: sc-177076, L929 cell lysate: sc-24729 or HeLa whole cell lysate: sc-2200.

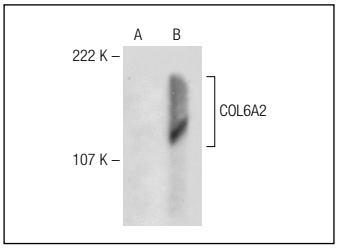
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



COL6A2 (H-300): sc-292186. Western blot analysis of COL6A2 expression in L929 whole cell lysate.



COL6A2 (H-300): sc-292186. Western blot analysis of COL6A2 expression in non-transfected: sc-117752 (**A**) and human COL6A2 transfected: sc-177076 (**B**) 293T whole cell lysates.

RESEARCH USE

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