

COL6A2 (K-15): sc-83608

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 WWFA 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.
6. Tillet, E., et al. 1994. Recombinant expression and structural and binding properties of α 1(VI) and α 2(VI) chains of human collagen type VI. *Eur. J. Biochem.* 221: 177-185.

CHROMOSOMAL LOCATION

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

SOURCE

COL6A2 (K-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of Collagen α 2 Type VI of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, ready P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COL6A2 (K-15) is recommended for detection of Collagen α 2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

COL6A2 (K-15) is also recommended for detection of Collagen α 2 Type VI in additional species, including equine, bovine, porcine and avian.

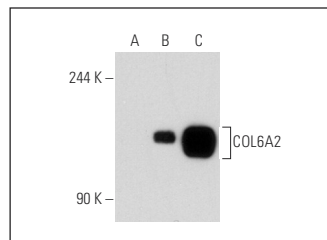
Suitable for use as control antibody for COL6A2 siRNA (h): sc-91429, COL6A2 siRNA (m): sc-142473, COL6A2 shRNA Plasmid (h): sc-91429-SH, COL6A2 shRNA Plasmid (m): sc-142473-SH, COL6A2 shRNA (h) Lentiviral Particles: sc-91429-V and COL6A2 shRNA (m) Lentiviral Particles: sc-142473-V.

Molecular Weight of COL6A2: 109 kDa.

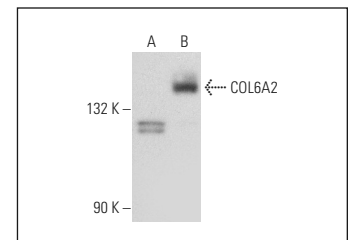
Molecular Weight of glycosylated COL6A2: 120-160 kDa.

Positive Controls: COL6A2 (m): 293T Lysate: sc-119370 HeLa whole cell lysate: sc-2200 or COL6A2 (h2): 293T Lysate: sc-177076 .

DATA



COL6A2 (K-15): sc-83608. Western blot analysis of COL6A2 expression in non-transfected 293T: sc-117752 (A), mouse COL6A2 transfected 293T: sc-119370 (B) and HeLa (C) whole cell lysates.



COL6A2 (K-15): sc-83608. 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.

MONOS
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Try **COL6A2 (B-7): sc-374566** or **COL6A1/2/3 (172C2): sc-47764**, our highly recommended monoclonal alternatives to COL6A2 (K-15).