

COL4A6 (M-137): sc-134613

BACKGROUND

Collagens are fibrous, extracellular matrix proteins with high tensile strength and are the major components of connective tissue, such as tendons and cartilage. Collagens contain triple helix domains and frequently show lateral self-association in order to form complex connective tissues. Several collagens play a role in cell adhesion, which is important for maintaining normal tissue architecture and function. COL4A6 (collagen, type IV, α 6) is a 1,691 amino acid secreted protein belonging to the type IV collagen family. Type IV collagen, a major component of the basement membrane (BM), is composed of six genetically distinct α (IV) chains, α 1(IV) to α 6(IV). Defects in the gene encoding COL4A6 is believed to be the cause of X-linked Alport syndrome (AS), which is characterized by macroscopic hematuria, cataracts and leiomyomatosis.

REFERENCES

- Zheng, K., et al. 1999. Absence of the α 6(IV) chain of collagen type IV in Alport syndrome is related to a failure at the protein assembly level and does not result in diffuse leiomyomatosis. *Am. J. Pathol.* 154: 1883-1891.
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- Mothes, H., et al. 2002. Alport syndrome associated with diffuse leiomyomatosis: COL4A5-COL4A6 deletion associated with a mild form of Alport nephropathy. *Nephrol. Dial. Transplant.* 17: 70-74.
- Anker, M.C., et al. 2003. Alport syndrome with diffuse leiomyomatosis. *Am. J. Med. Genet. A* 119A: 381-385.
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- Sund, M., et al. 2005. Bifunctional promoter of type IV collagen COL4A5 and COL4A6 genes regulates the expression of α 5 and α 6 chains in a distinct cell-specific fashion. *Biochem. J.* 387: 755-761.
- Ikeda, K., et al. 2006. Loss of expression of type IV collagen α 5 and α 6 chains in colorectal cancer associated with the hypermethylation of their promoter region. *Am. J. Pathol.* 168: 856-865.

CHROMOSOMAL LOCATION

Genetic locus: COL4A6 (human) mapping to Xq22.3; Col4a6 (mouse) mapping to X F1.

SOURCE

COL4A6 (M-137) is a rabbit polyclonal antibody raised against amino acids 1323-1459 mapping near the C-terminus of COL4A6 of mouse origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

COL4A6 (M-137) is recommended for detection of COL4A6 of mouse, rat and, to a lesser extent, 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).

COL4A6 (M-137) is also recommended for detection of COL4A6 in additional species, including equine.

Suitable for use as control antibody for COL4A6 siRNA (h): sc-91179, COL4A6 siRNA (m): sc-142470, COL4A6 shRNA Plasmid (h): sc-91179-SH, COL4A6 shRNA Plasmid (m): sc-142470-SH, COL4A6 shRNA (h) Lentiviral Particles: sc-91179-V and COL4A6 shRNA (m) Lentiviral Particles: sc-142470-V.

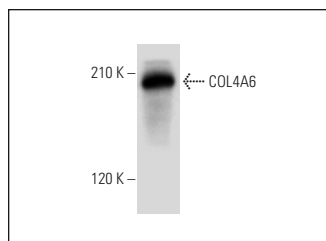
Molecular Weight of COL4A1 through COL4A6: 170-185 kDa.

Positive Controls: L929 cell lysate: sc-24729.

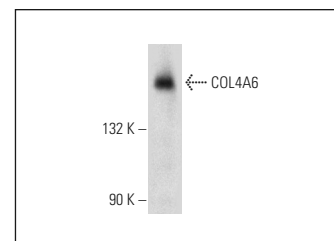
RECOMMENDED SECONDARY REAGENTS

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



COL4A6 (M-137): sc-134613. Western blot analysis of COL4A6 expression in L929 whole cell lysate.



COL4A6 (M-137): sc-134613. Western blot analysis of COL4A6 expression in Hep G2 whole cell lysate.

STORAGE

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

MONOS
Satisfaction
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Try **COL4A6 (G-2): sc-398655**, our highly recommended monoclonal alternative to COL4A6 (M-137).