

COL4A6 (G-2): sc-398655

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.

CHROMOSOMAL LOCATION

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

SOURCE

COL4A6 (G-2) is a mouse monoclonal antibody raised against amino acids 1323-1459 mapping near the C-terminus of COL4A6 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

COL4A6 (G-2) is available conjugated to agarose (sc-398655 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398655 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398655 PE), fluorescein (sc-398655 FITC), Alexa Fluor® 488 (sc-398655 AF488), Alexa Fluor® 546 (sc-398655 AF546), Alexa Fluor® 594 (sc-398655 AF594) or Alexa Fluor® 647 (sc-398655 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398655 AF680) or Alexa Fluor® 790 (sc-398655 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

COL4A6 (G-2) is recommended for detection of Collagen α 6 Type IV of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

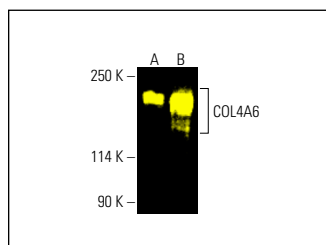
Molecular Weight of COL4A1 through COL4A6: 170-185 kDa.

Positive Controls: L929 cell lysate: sc-24729 or NIH/3T3 whole cell lysate: sc-2210.

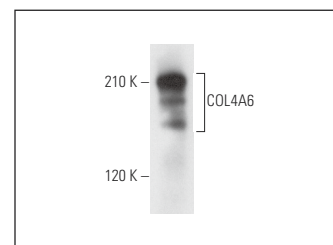
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



COL4A6 (G-2): sc-398655. Fluorescent western blot analysis of COL4A6 expression in L929 (A) and NIH/3T3 (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG₁ BP-CFL 488: sc-533661.



COL4A6 (G-2): sc-398655. Western blot analysis of COL4A6 expression in NIH/3T3 whole cell lysate.

SELECT PRODUCT CITATIONS

- Li, X., et al. 2019. miR-342-5p inhibits expression of Bmp7 to regulate proliferation, differentiation and migration of osteoblasts. *Mol. Immunol.* 114: 251-259.
- Matsubara, J.A., et al. 2020. Retinal distribution and extracellular activity of granzyme B: a serine protease that degrades retinal pigment epithelial tight junctions and extracellular matrix proteins. *Front. Immunol.* 11: 574.
- Hsieh, Y.H., et al. 2020. Arecoline induces epithelial mesenchymal transition in HK2 cells by upregulating the ERK-mediated signaling pathway. *Environ. Toxicol.* 35: 1007-1014.
- Zhang, H., et al. 2020. Pharmaceutical application of vitamin D₃ on particle-induced fibrotic effects through induction of Nrf2 signals. *Toxicol. Res.* 9: 55-66.
- Li, J., et al. 2020. Bixin protects against kidney interstitial fibrosis through promoting Stat6 degradation. *Front. Cell Dev. Biol.* 8: 576988.

STORAGE

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

RESEARCH USE

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