SANTA CRUZ BIOTECHNOLOGY, INC.

COL4A5 (H-234): sc-11360

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.
3. Engel, J. 1997. Versatile collagens in invertebrates. Science 277: 1785-1786.

CHROMOSOMAL LOCATION

Genetic locus: COL4A5 (human) mapping to Xq22.3; Col4a5 (mouse) mapping to X F2.

SOURCE

COL4A5 (H-234) is a rabbit polyclonal antibody raised against amino acids 1452-1685 mapping at the C-terminus of Collagen α5 Type IV 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.

APPLICATIONS

COL4A5 (H-234) is recommended for detection of Collagen Type IV α isoforms 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).

COL4A5 (H-234) is also recommended for detection of Collagen Type IV α isoforms in additional species, including bovine.

Suitable for use as control antibody for COL4A5 siRNA (h): sc-105229, COL4A5 siRNA (m): sc-142469, COL4A5 shRNA Plasmid (h): sc-105229-SH, COL4A5 shRNA Plasmid (m): sc-142469-SH, COL4A5 shRNA (h) Lentiviral Particles: sc-105229-V and COL4A5 shRNA (m) Lentiviral Particles: sc-142469-V.

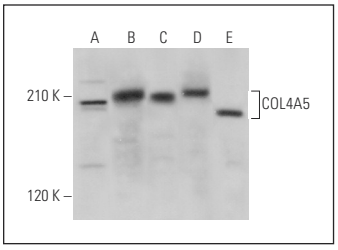
Molecular Weight of COL4A5: 160-190 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, ACHN whole cell lysate: sc-364365 or CCRF-CEM cell lysate: sc-2225.

STORAGE

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

DATA



COL4A5 (H-234): sc-11360. Western blot analysis of COL4A5 expression in CCRF-CEM (**A**), Sol8 (**B**), ACHN (**C**), RPE-J (**D**) and A-431 (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Siu, M.K., et al. 2003. The interplay of collagen IV, tumor necrosis factor-α, gelatinase B (matrix metalloprotease-9), and tissue inhibitor of metalloproteases-1 in the basal lamina regulates Sertoli cell-tight junction dynamics in the rat testis. Endocrinology 144: 371-387.
2. Okada, S., et al. 2003. Intercellular adhesion molecule-1-deficient mice are resistant against renal injury after induction of diabetes. Diabetes 52: 2586-2593.
3. Muenzner, P., et al. 2005. CEACAM engagement by human pathogens enhances cell adhesion and counteracts bacteria-induced detachment of epithelial cells. J. Cell Biol. 170: 825-836.
4. Frangié, C., et al. 2006. Extracellular calpains increase tubular epithelial cell mobility. Implications for kidney repair after ischemia. J. Biol. Chem. 281: 26624-26632.
5. Tveita, A.A., et al. 2008. Increased glomerular matrix metalloproteinase activity in murine lupus nephritis. Kidney Int. 74: 1150-1158.
6. Shui, H.A., et al. 2008. Urinary proteome and potential biomarkers associated with serial pathogenesis steps of focal segmental glomerulosclerosis. Nephrol. Dial. Transplant. 23: 176-185.
7. Hu, Q., et al. 2009. Therapeutic application of gene silencing MMP-9 in a middle cerebral artery occlusion-induced focal ischemia rat model. Exp. Neurol. 216: 35-46.
8. Ndisang, J., et al. 2009. Upregulating the heme oxygenase system suppresses left ventricular hypertrophy in adult spontaneously hypertensive rats for 3 months. J. Card. Fail. 5: 616-628.
9. Chin, H.J., et al. 2010. Omacor, n-3 polyunsaturated fatty acid, attenuated albuminuria and renal dysfunction with decrease of SREBP-1 expression and triglyceride amount in the kidney of type II diabetic animals. Nephrol. Dial. Transplant. 25: 1450-1457.

RESEARCH USE

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