

# COL24A1 (P-14): sc-162701

## 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. COL24A1 (collagen  $\alpha$ -1(XXIV) chain) is a 1,714 amino acid protein that localizes to extracellular matrix and belongs to the fibrillar collagen family. Existing as 2 alternatively spliced isoforms, COL24A1 contains one laminin G-like domain, a TSP N-terminal (TSPN) domain, 17 collagen-like domains and a single fibrillar collagen NC1 domain.

## REFERENCES

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2. Cremer, M.A., Rosloniec, E.F. and Kang, A.H. 1998. The cartilage collagens: a review of their structure, organization, and role in the pathogenesis of experimental arthritis in animals and in human rheumatic disease. *J. Mol. Med.* 76: 275-288.
3. Alberio, L. and Dale, G.L. 1999. Platelet-collagen interactions: membrane receptors and intracellular signaling pathways. *Eur. J. Clin. Invest.* 29: 1066-1076.
4. Boskey, A.L., Wright, T.M. and Blank, R.D. 1999. Collagen and bone strength. *J. Bone Miner. Res.* 14: 330-335.
5. Koch, M., Laub, F., Zhou, P., Hahn, R.A., Tanaka, S., Burgeson, R.E., Gerecke, D.R., Ramirez, F. and Gordon, M.K. 2003. Collagen XXIV, a vertebrate fibrillar collagen with structural features of invertebrate collagens: selective expression in developing cornea and bone. *J. Biol. Chem.* 278: 43236-43244.

## CHROMOSOMAL LOCATION

Genetic locus: COL24A1 (human) mapping to 1p22.3; Col24a1 (mouse) mapping to 3 H2.

## SOURCE

COL24A1 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Collagen  $\alpha$ 1 Type XXIV of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-162701 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

COL24A1 (P-14) is recommended for detection of Collagen  $\alpha$ 1 Type XXIV of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

COL24A1 (P-14) is also recommended for detection of Collagen  $\alpha$ 1 Type XXIV in additional species, including equine, canine and bovine.

Suitable for use as control antibody for COL24A1 siRNA (h): sc-88277, COL24A1 siRNA (m): sc-142465, COL24A1 shRNA Plasmid (h): sc-88277-SH, COL24A1 shRNA Plasmid (m): sc-142465-SH, COL24A1 shRNA (h) Lentiviral Particles: sc-88277-V and COL24A1 shRNA (m) Lentiviral Particles: sc-142465-V.

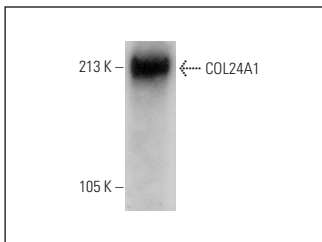
Molecular Weight of COL24A1: 175 kDa.

Positive Controls: mouse small intestine extract: sc-364252.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



COL24A1 (P-14): sc-162701. Western blot analysis of COL24A1 expression in mouse small intestine tissue extract.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.