

# COL5A3 (N-14): sc-240244

## 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. COL5A3 (collagen  $\alpha$ -3(V) chain) is a 1,745 amino acid extracellular matrix protein that belongs to the fibrillar collagen family and acts as a minor connective tissue. COL5A3 contains one TSP N-terminal (TSPN) domain, a fibrillar collagen NC1 domain and is encoded by a gene that maps to human chromosome 19p13.2.

## REFERENCES

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- 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.
- Alberio, L. and Dale, G.L. 1999. Review article: platelet-collagen interactions: membrane receptors and intracellular signalling pathways. *Eur. J. Clin. Invest.* 29: 1066-1076.
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## CHROMOSOMAL LOCATION

Genetic locus: COL5A3 (human) mapping to 19p13.2; Col5a3 (mouse) mapping to 9 A3.

## SOURCE

COL5A3 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Collagen  $\alpha$ 3 Type V 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-240244 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

COL5A3 (N-14) is recommended for detection of Collagen  $\alpha$ 3 Type V 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); non cross-reactive with other COL5A family members.

COL5A3 (N-14) is also recommended for detection of Collagen  $\alpha$ 3 Type V in additional species, including canine.

Suitable for use as control antibody for COL5A3 siRNA (h): sc-97621, COL5A3 siRNA (m): sc-142472, COL5A3 shRNA Plasmid (h): sc-97621-SH, COL5A3 shRNA Plasmid (m): sc-142472-SH, COL5A3 shRNA (h) Lentiviral Particles: sc-97621-V and COL5A3 shRNA (m) Lentiviral Particles: sc-142472-V.

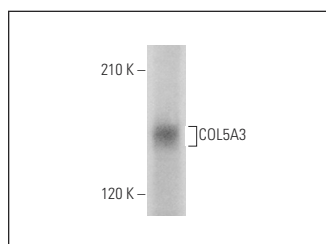
Molecular Weight of COL5A3: 172 kDa.

Positive Controls: mouse adipose tissue extract: sc-395042.

## 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



COL5A3 (N-14): sc-240244. Western blot analysis of COL5A3 expression in mouse adipose tissue extract.

## 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.