

# COL9A1 (H-81): sc-134753

## BACKGROUND

The Collagen Type IX protein (also known as Collagen  $\alpha$ 1 Type IX) is encoded by the COL9A1 gene which possesses two promoter regions and codes for both a long chain Collagen Type IX protein expressed in the cartilage, and a shorter Collagen Type IX protein expressed in the cornea and vitreous. Collagen Type IX forms a heterotrimer with Collagen  $\alpha$ 2 Type IX and Collagen  $\alpha$ 3 Type IX. When it is expressed in hyaline cartilage, Collagen Type IX possesses a large N-terminal globular domain (NC4). The COL9A1 gene is also expressed in the human inner ear, and disruption of this gene in mice results in hearing loss, indicating the role of Collagen Type IX in hearing. Mutations in the COL9A1 gene are associated with multiple epiphyseal dysplasia (MED), a chondrodysplasia, in humans. Collagen Type IX is often colocalized with Collagen Type II, and may play a role in the interaction of fibrils between Collagen Type II and Collagen Type IX.

## CHROMOSOMAL LOCATION

Genetic locus: COL9A1 (human) mapping to 6q13; Col9a1 (mouse) mapping to 1 A5.

## SOURCE

COL9A1 (H-81) is a rabbit polyclonal antibody raised against amino acids 532-612 mapping within an internal region of Collagen  $\alpha$ 1 Type IX 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.

## STORAGE

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

## APPLICATIONS

COL9A1 (H-81) is recommended for detection of Collagen  $\alpha$ 1 Type IX 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

COL9A1 (H-81) is also recommended for detection of Collagen  $\alpha$ 1 Type IX in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for COL9A1 siRNA (h): sc-45635, COL9A1 siRNA (m): sc-45636, COL9A1 shRNA Plasmid (h): sc-45635-SH, COL9A1 shRNA Plasmid (m): sc-45636-SH, COL9A1 shRNA (h) Lentiviral Particles: sc-45635-V and COL9A1 shRNA (m) Lentiviral Particles: sc-45636-V.

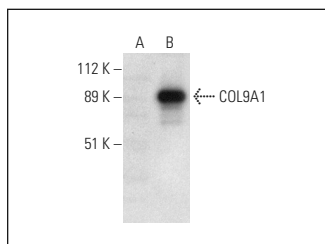
Molecular Weight of COL9A1: 92 kDa.

Positive Controls: COL9A1 (m2): 293T Lysate: sc-119373.

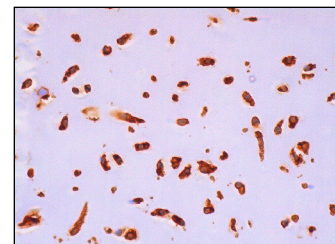
## RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



COL9A1 (H-81): sc-134753. Western blot analysis of COL9A1 expression in non-transfected: sc-117752 (A) and mouse COL9A1 transfected: sc-119373 (B) 293T whole cell lysates.



COL9A1 (H-81): sc-134753. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cartilage tissue showing cytoplasmic staining of chondrocytes.

## RESEARCH USE

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

## PROTOCOLS

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

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Try **COL9A1 (H-7): sc-376969**, our highly recommended monoclonal alternative to COL9A1 (H-81).