SANTA CRUZ BIOTECHNOLOGY, INC.

COL9A2 (C-17): sc-242494

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. COL9A2 (collagen α2 (IX) chain), also known as MED or EDM2, is a 689 amino acid extracellular matrix protein and component of hyaline cartilage and vitreous of the eye. A member of the fibril-associated collagens with interrupted helices (FACIT) family, COL9A2 is encoded by a gene that maps to human chromosome 1p34.2. Mutations in the COL9A2 gene are linked to multiple epiphyseal dysplasia.

REFERENCES

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2. Cremer, M.A., et al. 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. Pihlajamaa, T., et al. 1998. Human COL9A1 and COL9A2 genes. Two genes of 90 and 15 kb code for similar polypeptides of the same collagen molecule. Matrix Biol. 17: 237-241.
4. 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.
5. Boskey, A.L., et al. 1999. Collagen and bone strength. J. Bone Miner. Res. 14: 330-335.
6. Annunen, S., et al. 1999. An allele of COL9A2 associated with intervertebral disc disease. Science 285: 409-412.
7. Czarny-Ratajczak, M., et al. 2001. A mutation in COL9A1 causes multiple epiphyseal dysplasia: further evidence for locus heterogeneity. Am. J. Hum. Genet. 69: 969-980.

CHROMOSOMAL LOCATION

Genetic locus: COL9A2 (human) mapping to 1p34.2; Col9a2 (mouse) mapping to 4 D2.2.

SOURCE

COL9A2 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Collagen α2 Type IX 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.

Blocking peptide available for competition studies, sc-242494 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COL9A2 (C-17) is recommended for detection of Collagen α2 Type IX 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); non cross-reactive with COL9A1 or COL9A3.

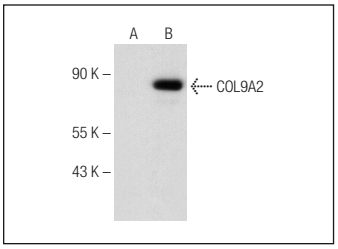
COL9A2 (C-17) is also recommended for detection of Collagen α2 Type IX in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for COL9A2 siRNA (h): sc-78705, COL9A2 siRNA (m): sc-142476, COL9A2 shRNA Plasmid (h): sc-78705-SH, COL9A2 shRNA Plasmid (m): sc-142476-SH, COL9A2 shRNA (h) Lentiviral Particles: sc-78705-V and COL9A2 shRNA (m) Lentiviral Particles: sc-142476-V.

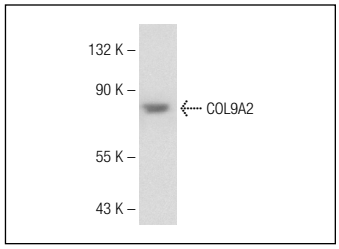
Molecular Weight of COL9A2: 65 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or COL9A2 (m): 293T Lysate: sc-125159.

DATA



COL9A2 (C-17): sc-242494. Western blot analysis of COL9A2 expression in non-transfected: sc-117752 (**A**) and mouse COL9A2 transfected: sc-125159 (**B**) 293T whole cell lysates.



COL9A2 (C-17): sc-242494. Western blot analysis of COL9A2 expression in Hep G2 whole cell lysate.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.