SANTA CRUZ BIOTECHNOLOGY, INC.

COL4A1/3 (G-20): sc-9301



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

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- 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.
- 4. 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
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- 6. Alberio, L., et al. 1999. Platelet-collagen interactions: membrane receptors and intracellular signaling pathways. Eur. J. Clin. Invest. 29: 1066-1076.
- 7. Kalluri, R., 2002. Discovery of type IV collagen non-collagenous domains as novel integrin ligands and endogenous inhibitors of angiogenesis. Cold Spring Harb. Symp. Quant. Biol. 67: 255-266.
- 8. Pescucci, C., et al. 2003. Type-IV collagen related diseases. J. Nephrol. 16: 314-316.
- 9. Kim, S.J., et al. 2004. Effects of type IV collagen and laminin on the cryopreservation of human embryonic stem cells. Stem Cells 22: 950-961.

CHROMOSOMAL LOCATION

Genetic locus: COL4A1 (human) mapping to 13q34, COL4A3 (human) mapping to 2q36.3; Col4a1 (mouse) mapping to 8 A1.1, Col4a3 (mouse) mapping to 1 C5.

SOURCE

COL4A1/3 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Collagen α 1 Type IV of human origin.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9301 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COL4A1/3 (G-20) is recommended for detection of Collagen Type IV α 1 and α 3 isoforms of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

COL4A1/3 (G-20) is also recommended for detection of Collagen Type IV α 1 and α 3 isoforms in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of COL4A1/3: 160-190 kDa

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or Hs68 cell lysate: sc-2230.

DATA



COL4A1/3 (G-20): sc-9301. Immunofluorescence staining of methanol-fixed Hs68 cells showing cytoplasmic localization

SELECT PRODUCT CITATIONS

- 1. Yao, Y., et al. 2008. Telmisartan but not valsartan inhibits TGF-β-mediated accumulation of extracellular matrix via activation of PPARy. J. Huazhong Univ. Sci. Technol. Med. Sci. 28: 543-548.
- 2. Zou, R., et al. 2010. PPARy agonists inhibit TGF-B-PKA signaling in glomerulosclerosis. Acta Pharmacol. Sin. 31: 43-50.
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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.