

COL4A (5F75): sc-70866

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

1. Bateman, J.F., et al. 1996. Collagen Superfamily. In Comper, W.D., ed., Extracellular Matrix, Vol. 2: Molecular Components and Interactions. Amsterdam: Harwood Academic Publishers, 22-67.
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.
5. Boskey, A.L., et al. 1999. Collagen and bone strength. *J. Bone Miner. Res.* 14: 330-335.
6. Alberio, L. and Dale, G.L. 1999. Platelet-collagen interactions: membrane receptors and intracellular signaling pathways. *Eur. J. Clin. Invest.* 29: 1066-1076.

CHROMOSOMAL LOCATION

Genetic locus: COL4A3 (human) mapping to 2q36.3.

SOURCE

COL4A (5F75) is a mouse monoclonal antibody raised against isolated placenta of human origin.

PRODUCT

Each vial contains 500 µl ascites containing IgG_{2b} with < 0.1% sodium azide.

APPLICATIONS

COL4A (5F75) is recommended for detection of Collagen Type IV of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

Molecular Weight of COL4A: 106-190 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

SELECT PRODUCT CITATIONS

1. Yavasoglu, N.U., et al. 2012. Induction of oxidative stress and histological changes in liver by subacute doses of butyl cyclohexyl phthalate. *Environ. Toxicol.* E-published.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

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.