SANTA CRUZ BIOTECHNOLOGY, INC.

COL5A1 (H-200): sc-20648

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.

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.
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: COL5A1 (human) mapping to 9q34.3; Col5a1 (mouse) mapping to 2 A3.

SOURCE

COL5A1 (H-200) is a rabbit polyclonal antibody raised against amino acids 251-450 mapping within an extracellular domain of Collagen α1 Type V 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.

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.

APPLICATIONS

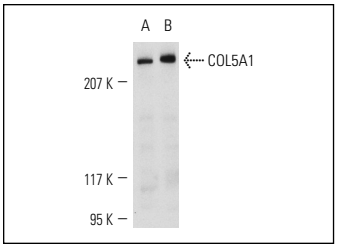
COL5A1 (H-200) is recommended for detection of Collagen α1 Type V of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for COL5A1 siRNA (h): sc-35083, COL5A1 siRNA (m): sc-35084, COL5A1 shRNA Plasmid (h): sc-35083-SH, COL5A1 shRNA Plasmid (m): sc-35084-SH, COL5A1 shRNA (h) Lentiviral Particles: sc-35083-V and COL5A1 shRNA (m) Lentiviral Particles: sc-35084-V.

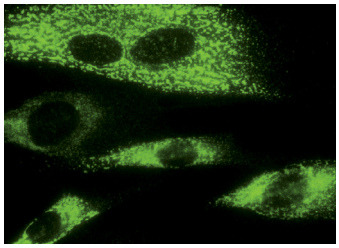
Molecular Weight of COL5A1 isoforms: 220/140 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263, Hs68 cell lysate: sc-2230 or HeLa nuclear extract: sc-2120.

DATA



COL5A1 (H-200): sc-20648. Western blot analysis of COL5A1 expression in CCD-1064Sk (**A**) and Hs68 (**B**) whole cell lysates.



COL5A1 (H-200): sc-20648. Immunofluorescence staining of methanol-fixed Hs68 cells showing cytoplasmic and extracellular localization.

SELECT PRODUCT CITATIONS

1. Luistro, L., et al. 2009. Preclinical profile of a potent γ-secretase inhibitor targeting notch signaling with *in vivo* efficacy and pharmacodynamic properties. Cancer Res. 69: 7672-7680.
2. Spencer, M., et al. 2011. Adipose tissue extracellular matrix and vascular abnormalities in obesity and Insulin resistance. J. Clin. Endocrinol. Metab. 96: E1990-E1998.
3. Joseph, J.V., et al. 2014. TGF-β is an inducer of ZEB1-dependent mesenchymal transdifferentiation in glioblastoma that is associated with tumor invasion. Cell Death Dis. 5: e1443.
4. Arseni, L., et al. 2015. TFIIH-dependent MMP-1 overexpression in trichothiodystrophy leads to extracellular matrix alterations in patient skin. Proc. Natl. Acad. Sci. USA 112: 1499-1504.