SANTA CRUZ BIOTECHNOLOGY, INC.

COL1A2 (M-19): sc-8788

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

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.

CHROMOSOMAL LOCATION

Genetic locus: COL1A2 (human) mapping to 7q21.3; Col1a2 (mouse) mapping to 6 A1.

SOURCE

COL1A2 (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Collagen α2 Type I of mouse 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-8788 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COL1A2 (M-19) is recommended for detection of Collagen α2 Type I of mouse, rat and, to a lesser extent, 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 COL1A2 siRNA (h): sc-72156, COL1A2 siRNA (m): sc-43061, COL1A2 shRNA Plasmid (h): sc-72156-SH, COL1A2 shRNA Plasmid (m): sc-43061-SH, COL1A2 shRNA (h) Lentiviral Particles: sc-72156-V and COL1A2 shRNA (m) Lentiviral Particles: sc-43061-V.

Molecular Weight of COL1A2 precursor: 130-140 kDa.

Molecular Weight of mature COL1A2: 70-90 kDa.

Positive Controls: mouse skin extract: sc-364251.

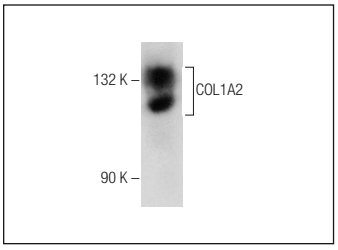
RESEARCH USE

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

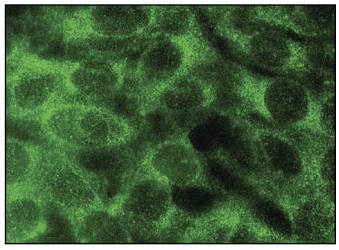
STORAGE

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

DATA



COL1A2 (M-19): sc-8788. Western blot analysis of COL1A2 expression in mouse skin tissue extract.



COL1A2 (M-19): sc-8788. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Dubay, D.A., et al. 2004. Fascial fibroblast kinetic activity is increased during abdominal wall repair compared to dermal fibroblasts. Wound Repair Regen. 12: 539-545.
2. Dodig, M., et al. 2007. Differences in regulation of type I collagen synthesis in primary and passaged hepatic stellate cell cultures: the role of $\alpha5\beta1$-integrin. Am. J. Physiol. Gastrointest. Liver Physiol. 293: G154-G164.
3. Wu, Y., et al. 2007. Hypothyroidism leads to increased collagen-based stiffness and re-expression of large cardiac titin isoforms with high compliance. J. Mol. Cell. Cardiol. 42: 186-195.
4. Faria, P.E., et al. 2008. Immunohistochemical, tomographic and histological study on onlay iliac grafts remodeling. Clin. Oral Implants Res. 19: 393-401.
5. Pedrosa, W.F., et al. 2009. Immunohistochemical, tomographic and histological study on onlay bone graft remodeling. Part II: calvarial bone. Clin. Oral Implants Res. 20: 1254-1264.
6. Tada, Y., et al. 2010. Characterization of cardiac size and function in SHRSP.Z-Lepr(fa)/IzmDmcr rats, a new animal model of metabolic syndrome. Biol. Pharm. Bull. 33: 1971-1976.
7. Shyu, K.G., et al. 2013. Mechanical stretch via transforming growth factor-$\beta1$ activates microRNA208a to regulate endoglin expression in cultured rat cardiac myoblasts. Eur. J. Heart Fail. 15: 36-45.
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