SANTA CRUZ BIOTECHNOLOGY, INC.

COL1A1 (L-19): sc-8783

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.

CHROMOSOMAL LOCATION

Genetic locus: COL1A1 (human) mapping to 17q21.33.

SOURCE

COL1A1 (L-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Collagen α1 Type I of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8783 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COL1A1 (L-19) is recommended for detection of collagen α1 type I of 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).

COL1A1 (L-19) is also recommended for detection of collagen α1 type I in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for COL1A1 siRNA (h): sc-44041, COL1A1 shRNA Plasmid (h): sc-44041-SH and COL1A1 shRNA (h) Lentiviral Particles: sc-44041-V.

Molecular Weight of COL1A1 precursor: 140-210 kDa.

Molecular Weight of mature COL1A1: 70-90 kDa.

Positive Controls: Hs68 cell lysate: sc-2230, CCD-1064Sk cell lysate: sc-2263 or Hs 732.Sk/Mu whole cell lysate: sc-364362.

STORAGE

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

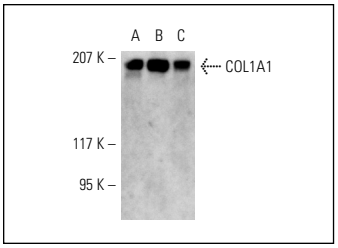
PROTOCOLS

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

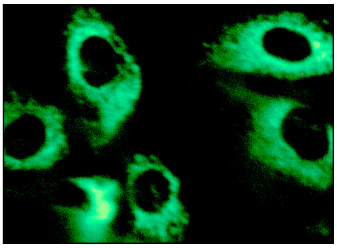
RESEARCH USE

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

DATA



COL1A1 (L-19): sc-8783. Western blot analysis of COL1A1 expression in Hs68 (**A**), CCD-1064Sk (**B**) and Hs 732.Sk/Mu (**C**) whole cell lysates.



COL1A1 (L-19): sc-8783. Immunofluorescence staining of methanol-fixed Hs68 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Tewfik, M.A., et al. 2003. Nitric oxide and collagen expression in allergic upper-airway disease. Am. J. Rhinol. 17: 269-274.
2. Hsu, E. and Feghali-Bostwick, C.A. 2008. Insulin-like growth factor-II is increased in systemic sclerosis-associated pulmonary fibrosis and contributes to the fibrotic process via Jun N-terminal kinase- and phosphatidylinositol-3 kinase-dependent pathways. Am. J. Pathol. 172: 1580-1590.
3. Yasuoka, H., et al. 2009. The pro-fibrotic factor IGFBP-5 induces lung fibroblast and mononuclear cell migration. Am. J. Respir. Cell Mol. Biol. 41: 179-188.
4. Zode, G.S., et al. 2009. Bone morphogenetic protein 4 inhibits TGF-β2 stimulation of extracellular matrix proteins in optic nerve head cells: role of gremlin in ECM modulation. Glia 57: 755-766.
5. Zode, G.S., et al. 2011. Transforming growth factor-β2 increases extracellular matrix proteins in optic nerve head cells via activation of the Smad signaling pathway. Mol. Vis. 17: 1745-1758.
6. Ohto-Fujita, E., et al. 2011. Hydrolyzed eggshell membrane immobilized on phosphorylcholine polymer supplies extracellular matrix environment for human dermal fibroblasts. Cell Tissue Res. 345: 177-190.
7. Kozono, S., et al. 2013. Pirfenidone inhibits pancreatic cancer desmoplasia by regulating stellate cells. Cancer Res. 73: 2345-2356.
8. Attia-Vigneau, J., et al. 2014. Regeneration of human dermis by a multi-headed peptide. J. Invest. Dermatol. 34: 58-67.