SANTA CRUZ BIOTECHNOLOGY, INC.

COL6A1 (B-4): sc-377143

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: COL6A1 (human) mapping to 21q22.3; Col6a1 (mouse) mapping to 10 C1.

SOURCE

COL6A1 (B-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 53-87 within an internal region of Collagen α1 Type VI of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

COL6A1 (B-4) is available conjugated to agarose (sc-377143 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-377143 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377143 PE), fluorescein (sc-377143 FITC), Alexa Fluor® 488 (sc-377143 AF488), Alexa Fluor® 546 (sc-377143 AF546), Alexa Fluor® 594 (sc-377143 AF594) or Alexa Fluor® 647 (sc-377143 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377143 AF680) or Alexa Fluor® 790 (sc-377143 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377143 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

COL6A1 (B-4) is recommended for detection of Collagen α1 Type VI of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 COL6A1 siRNA (h): sc-35085, COL6A1 siRNA (m): sc-35086, COL6A1 shRNA Plasmid (h): sc-35085-SH, COL6A1 shRNA Plasmid (m): sc-35086-SH, COL6A1 shRNA (h) Lentiviral Particles: sc-35085-V and COL6A1 shRNA (m) Lentiviral Particles: sc-35086-V.

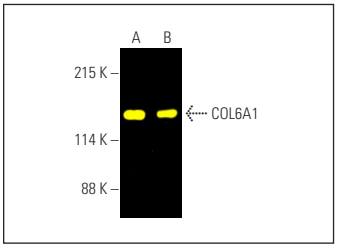
Molecular Weight of COL6A1: 140 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, CCD-1064Sk cell lysate: sc-2263 or WI-38 whole cell lysate: sc-364260.

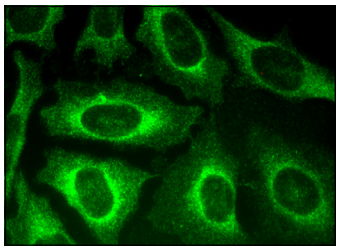
STORAGE

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

DATA



COL6A1 (B-4) Alexa Fluor® 488: sc-377143 AF488. Direct fluorescent western blot analysis of COL6A1 expression in WI-38 (**A**) and U-87 MG (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



COL6A1 (B-4): sc-377143. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Bertorello, A.M., et al. 2015. Increased arterial blood pressure and vascular remodeling in mice lacking salt-inducible kinase 1 (SIK1). Circ. Res. 116: 642-652.
2. Endicott, J., et al. 2017. Authentication of collagen VI antibodies. BMC Res. Notes 10: 358.
3. Kim, S.H. and Park, J.W. 2019. IDH2 deficiency impairs cutaneous wound healing via Ros-dependent apoptosis. Biochim. Biophys. Acta Mol. Basis Dis. 1865: 165523.
4. Yin, P., et al. 2020. Non-canonical Fzd7 signaling contributes to breast cancer mesenchymal-like stemness involving COL6A1. Cell Commun. Signal. 18: 143.
5. Pietilä, E.A., et al. 2021. Co-evolution of matrisome and adaptive adhesion dynamics drives ovarian cancer chemoresistance. Nat. Commun. 12: 3904.
6. Bell, E.S., et al. 2022. Low Lamin A levels enhance confined cell migration and metastatic capacity in breast cancer. Oncogene 41: 4211-4230.
7. Nagao, H., et al. 2023. Unique ligand and kinase-independent roles of the Insulin receptor in regulation of cell cycle, senescence and apoptosis. Nat. Commun. 14: 57.
8. Cai, S., et al. 2023. Transcriptomic analysis of the upper lip and primary palate development in mice. Front. Genet. 13: 1039850.
9. Lin, X., et al. 2023. Targeting synovial lymphatic function as a novel therapeutic intervention for age-related osteoarthritis in mice. Arthritis Rheumatol. 75: 923-936.
10. Taheri, A., et al. 2023. Hesperetin attenuates the expression of markers of adipose tissue fibrosis in pre-adipocytes. BMC Complement. Med. Ther. 23: 315.

RESEARCH USE

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