

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

SOURCE

COL1A2 (E-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1064-1093 at the C-terminus of Collagen $\alpha 2$ Type I of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

COL1A2 (E-6) is available conjugated to agarose (sc-393573 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393573 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393573 PE), fluorescein (sc-393573 FITC), Alexa Fluor[®] 488 (sc-393573 AF488), Alexa Fluor[®] 546 (sc-393573 AF546), Alexa Fluor[®] 594 (sc-393573 AF594) or Alexa Fluor[®] 647 (sc-393573 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393573 AF680) or Alexa Fluor[®] 790 (sc-393573 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393573 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

COL1A2 (E-6) is recommended for detection of Collagen $\alpha 2$ Type I of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

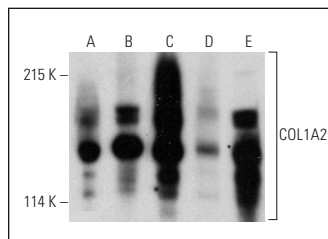
Suitable for use as control antibody for COL1A2 siRNA (h): sc-72156, COL1A2 siRNA (m): sc-43061, COL1A2 shRNA Plasmid (h): sc-72156-SH, COL1A2 shRNA Plasmid (m): sc-43061-SH, COL1A2 shRNA (h) Lentiviral Particles: sc-72156-V and COL1A2 shRNA (m) Lentiviral Particles: sc-43061-V.

Molecular Weight of mature COL1A2: 70-90 kDa.

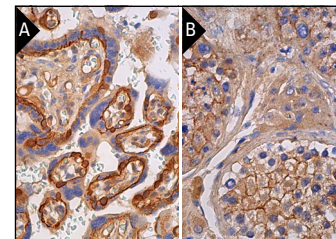
Molecular Weight of COL1A2 precursor: 130-140 kDa.

STORAGE

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

DATA

COL1A2 (E-6) HRP: sc-393573 HRP. Direct western blot analysis of COL1A2 expression in 3T3-L1 (A), CCD-1064Sk (B), A-10 (C), C2C12 (D) and C3H/10T1/2 (E) whole cell lysates.



COL1A2 (E-6): sc-393573. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat placenta tissue showing membrane and cytoplasmic staining of trophoblastic cells and extracellular staining of connective tissue (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat testis tissue showing membrane and cytoplasmic staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells (B).

SELECT PRODUCT CITATIONS

- Miotti, S., et al. 2017. Antibody-mediated blockade of JMJD6 interaction with Collagen I exerts antifibrotic and antimetastatic activities. *FASEB J.* 31: 5356-5370.
- Li, S.S., et al. 2018. Reduction of PGRN increased fibrosis during skin wound healing in mice. *Histol. Histopathol.* 34: 765-774.
- Leiblein, M., et al. 2019. Do antiosteoporotic drugs improve bone regeneration *in vivo*? *Eur. J. Trauma Emerg. Surg.* 46: 287-299.
- Bansod, S., et al. 2020. Nimbolide abrogates cerulein-induced chronic pancreatitis by modulating β -catenin/Smad in a sirtuin-dependent way. *Pharmacol. Res.* 156: 104756.
- Matsubara, J.A., et al. 2020. Retinal distribution and extracellular activity of granzyme B: a serine protease that degrades retinal pigment epithelial tight junctions and extracellular matrix proteins. *Front. Immunol.* 11: 574.
- Leyva-López, N., et al. 2020. Exploitation of agro-industrial waste as potential source of bioactive compounds for aquaculture. *Foods* 9: E843.
- Jeong, J.H., et al. 2020. A new TGF- $\beta 1$ inhibitor, CTI-82, antagonizes epithelial-mesenchymal transition through inhibition of phospho-SMAD2/3 and phospho-ERK. *Biology* 9: E143.
- Hohl, M., et al. 2020. Cathepsin A contributes to left ventricular remodeling by degrading extracellular superoxide dismutase in mice. *J. Biol. Chem.* E-published.

RESEARCH USE

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

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