

COL7A1 (4D2): sc-33710

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, Volume 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: COL7A1 (human) mapping to 3p21.31.

SOURCE

COL7A1 (4D2) is a mouse monoclonal antibody raised against SDS-insoluble proteins of normal skin of human origin.

PRODUCT

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

COL7A1 (4D2) is available conjugated to agarose (sc-33710 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33710 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33710 PE), fluorescein (sc-33710 FITC), Alexa Fluor[®] 488 (sc-33710 AF488), Alexa Fluor[®] 546 (sc-33710 AF546), Alexa Fluor[®] 594 (sc-33710 AF594) or Alexa Fluor[®] 647 (sc-33710 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-33710 AF680) or Alexa Fluor[®] 790 (sc-33710 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

COL7A1 (4D2) is recommended for detection of Collagen Type VII 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

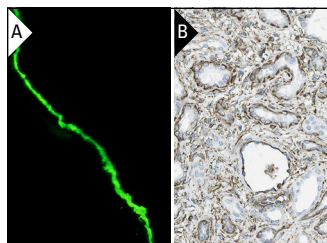
Suitable for use as control antibody for COL7A1 siRNA (h): sc-43066, COL7A1 shRNA Plasmid (h): sc-43066-SH and COL7A1 shRNA (h) Lentiviral Particles: sc-43066-V.

Molecular Weight of COL7A1: 290 kDa.

STORAGE

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

DATA



COL7A1 (4D2): sc-33710. Immunofluorescence staining of normal human cornea frozen section showing basement membrane staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomeruli and tubules. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

1. El-Domyati, M., et al. 2010. Electro-optical synergy technique: a new and effective nonablative approach to skin aging. J. Clin. Aesthet. Dermatol. 3: 22-30.
2. El-Domyati, M., et al. 2011. Effects of the Nd:YAG 1320-nm laser on skin rejuvenation: clinical and histological correlations. J. Cosmet. Laser Ther. 13: 98-106.
3. El-Domyati, M., et al. 2012. Efficacy of mesotherapy in facial rejuvenation: a histological and immunohistochemical evaluation. Int. J. Dermatol. 51: 913-919.
4. El-Domyati, M., et al. 2013. Fractional versus ablative erbium:yttrium-aluminum-garnet laser resurfacing for facial rejuvenation: an objective evaluation. J. Am. Acad. Dermatol. 68: 103-112.
5. Boone, M., et al. 2014. Real-time three-dimensional imaging of epidermal splitting and removal by high-definition optical coherence tomography. Exp. Dermatol. 23: 725-730.
6. Dos Santos, M., et al. 2015. *In vitro* 3-D model based on extending time of culture for studying chronological epidermis aging. Matrix Biol. 47: 85-97.
7. El-Domyati, M., et al. 2015. Multiple microneedling sessions for minimally invasive facial rejuvenation: an objective assessment. Int. J. Dermatol. 54: 1361-1369.
8. Boone, M.A., et al. 2015. Recellularizing of human acellular dermal matrices imaged by high-definition optical coherence tomography. Exp. Dermatol. 24: 349-354.

RESEARCH USE

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