SANTA CRUZ BIOTECHNOLOGY, INC.

COL17A1 (E-16): sc-26395

The Power to Question

BACKGROUND

The extensive collagen family comprises several chain types, including fibril-forming interstitial collagens and basement membrane collagens, with each type containing multiple isoforms. Products of the COL gene family, collagens are characterized as fibrous, extracellular matrix proteins with high tensile strength that constitute the major components of connective tissues, 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. Collagen Type XVII, also designated BP180, represents a type II transmembrane, epithelial adhesion molecule that plays a role in cell migration and differentiation. The full length Collagen Type XVII protein is expressed in hemidesmosomes of keratinocytes. Proteolytic shedding of Collagen Type XVII results in a species in the extracellular matrix, and this process may be mediated by a disintegrin and metalloprotease (ADAM) family member. The BPAG2 gene, which encodes the Collagen Type XVII protein, maps to human chromosome 10q24.33. Mutations in this gene result in Bullous pemphigoid, an inflammatory subepidermal blistering skin disease associated with an IgG autoimmune response to Collagen Type XVII.

REFERENCES

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2. 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.
3. Engel, J. 1997. Versatile collagens in invertebrates. Science 277: 1785-1786.
4. Cremer, M.A., et al. 1998. The cartilage collagens: a review of their structure, organization, and role in the pathogenesis of experimental arthritis in animals and in human rheumatic disease. J. Mol. Med. 76: 275-288.
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6. Parikka, M., et al. 2001. Altered expression of Collagen XVII in ameloblastomas and basal cell carcinomas. J. Oral Pathol. Med. 30: 589-595.
7. Franzke, C.W., et al. 2002. Transmembrane Collagen XVII, an epithelial adhesion protein, is shed from the cell surface by ADAMs. EMBO J. 21: 5026-5035.

CHROMOSOMAL LOCATION

Genetic locus: COL17A1 (human) mapping to 10q24.33; Col17a1 (mouse) mapping to 19 D1.

SOURCE

COL17A1 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Collagen Type XVII of human 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-26395 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COL17A1 (E-16) is recommended for detection of Collagen Type XVII of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

COL17A1 (E-16) is also recommended for detection of Collagen Type XVII in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for COL17A1 siRNA (h): sc-43070, COL17A1 siRNA (m): sc-43071, COL17A1 shRNA Plasmid (h): sc-43070-SH, COL17A1 shRNA Plasmid (m): sc-43071-SH, COL17A1 shRNA (h) Lentiviral Particles: sc-43070-V and COL17A1 shRNA (m) Lentiviral Particles: sc-43071-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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