SANTA CRUZ BIOTECHNOLOGY, INC.

COL6A6 (E-13): sc-167529



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. COL6A6 (collagen α -6(VI) chain) is a 2,263 amino acid extracellular matrix protein that belongs to the type VI collagen family and plays a role in cell binding. Containing nine VWFA domains, COL6A6 exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 3q22.1.

REFERENCES

- McCarthy, J.B., Vachhani, B. and Iida, J. 1996. Cell adhesion to collagenous matrices. Biopolymers 40: 371-381.
- Cremer, M.A., Rosloniec, E.F. and Kang, A.H. 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.
- Alberio, L. and Dale, G.L. 1999. Review article: platelet-collagen interactions: membrane receptors and intracellular signalling pathways. Eur. J. Clin. Invest. 29: 1066-1076.
- Boskey, A.L., Wright, T.M. and Blank, R.D. 1999. Collagen and bone strength. J. Bone Miner. Res. 14: 330-335.
- Gara, S.K., Grumati, P., Urciuolo, A., Bonaldo, P., Kobbe, B., Koch, M., Paulsson, M. and Wagener, R. 2008. Three novel collagen VI chains with high homology to the α3 chain. J. Biol. Chem. 283: 10658-10670.
- 6. Fitzgerald, J., Rich, C., Zhou, F.H. and Hansen, U. 2008. Three novel collagen VI chains, $\alpha 4$ (VI), $\alpha 5$ (VI), and $\alpha 6$ (VI). J. Biol. Chem. 283: 20170-20180.

CHROMOSOMAL LOCATION

Genetic locus: COL6A6 (human) mapping to 3q22.1; Col6a6 (mouse) mapping to 9 F1.

SOURCE

COL6A6 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of COL6A6 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-167529 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

COL6A6 (E-13) is recommended for detection of COL6A6 of mouse, rat and 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); non cross-reactive with other COL6A family members.

COL6A6 (E-13) is also recommended for detection of COL6A6 in additional species, including equine and bovine.

Suitable for use as control antibody for COL6A6 siRNA (m): sc-142474, COL6A6 shRNA Plasmid (m): sc-142474-SH and COL6A6 shRNA (m) Lentiviral Particles: sc-142474-V.

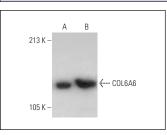
Molecular Weight of COL6A6: 247 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



COL6A6 (E-13): sc-167529. Western blot analysis of COL6A6 expression in Jurkat (**A**) and K-562 (**B**) whole cell lysates.

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.