SANTA CRUZ BIOTECHNOLOGY, INC.

Biglycan (910E2): sc-517577

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Biglycan, a class I small leucine rich proteoglycan (SLRP) present in the extracellular matrix, influences bone cell differentiation and proliferation. Biglycan contains two chondroitin sulfate glucosaminoglycan (GAG) chains attached near its amino terminus, whereas a closely related SLRP, decorin, contains only one. Biglycan deficient specimens possess diminished capacity to produce bone cells precursors, a lessened response to TGFβ, reduced collagen synthesis, and increased apoptosis. Patients with rheumatoid arthritis express increased immunity to Biglycan whereas osteoarthritis patients do not, suggesting that higher immunity to SLRPs may play a role in the pathogenesis of inflammatory rheumatic diseases.

REFERENCES

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3. Young, M.F., Bi, Y., Ameye, L. and Chen, X.D. 2002. Biglycan knockout mice: new models for musculoskeletal diseases. Glycoconj. J. 19: 257-262.
4. Goldberg, M., Septier, D., Rapoport, O., Young, M. and Ameye, L. 2002. Biglycan is a repressor of amelogenin expression and enamel formation: an emerging hypothesis. J. Dent. Res. 81: 520-524.
5. Waddington, R.J., Roberts, H.C., Sugars, R.V. and Schönherr, E. 2003. Differential roles for small leucine-rich proteoglycans in bone formation. Eur. Cell Mater. 6: 12-21.
6. Polgár, A., Falus, A., Koó, E., Ujfalussy, I., Seszták, M., Szuts, I., Konrád, K., Hodinka, L., Bene, E., Mészáros, G., Ortutay, Z., Farkas, E., Paksy, A. and Buzás, E.I. 2003. Elevated levels of synovial fluid antibodies reactive with the small proteoglycans Biglycan and decorin in patients with rheumatoid arthritis or other joint diseases. Rheumatology 42: 522-527.

CHROMOSOMAL LOCATION

Genetic locus: BGN (human) mapping to Xq28.

SOURCE

Biglycan (910E2) is a mouse monoclonal antibody raised against Biglycan of human origin.

PRODUCT

Each vial contains 200 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Biglycan (910E2) is recommended for detection of Biglycan 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), 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).

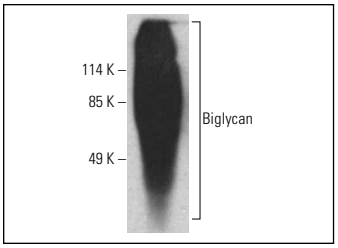
Biglycan (910E2) is also recommended for detection of Biglycan in additional species, including bovine.

Suitable for use as control antibody for Biglycan siRNA (h): sc-43633, Biglycan shRNA Plasmid (h): sc-43633-SH and Biglycan shRNA (h) Lentiviral Particles: sc-43633-V.

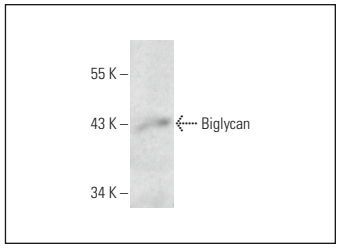
Molecular Weight of Biglycan: 45 kDa.

Positive Controls: human kidney extract: sc-363764 or human cartilage extract: sc-363755.

DATA



Biglycan (910E2): sc-517577. Western blot analysis of Biglycan expression in human cartilage tissue extract.



Biglycan (910E2): sc-517577. Western blot analysis of Biglycan expression in human kidney tissue extract.

SELECT PRODUCT CITATIONS

1. Liu, M., Wang, W., Piao, S., Shen, Y., Li, Z., Ding, W., Li, J. and Saiyin, W. 2023. Relationship of Biglycan and decorin expression with clinicopathological features and prognosis in patients with oral squamous cell carcinoma. J. Oral Pathol. Med. 52: 20-28.

RESEARCH USE

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

PROTOCOLS

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