

# Biglycan (3E2): sc-100857

## 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 TGF $\beta$ , 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.

## CHROMOSOMAL LOCATION

Genetic locus: BGN (human) mapping to Xq28; Bgn (mouse) mapping to X A7.3.

## SOURCE

Biglycan (3E2) is a mouse monoclonal antibody raised against recombinant Biglycan of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Biglycan (3E2) is recommended for detection of precursor and mature Biglycan of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Biglycan siRNA (h): sc-43633, Biglycan siRNA (m): sc-45735, Biglycan shRNA Plasmid (h): sc-43633-SH, Biglycan shRNA Plasmid (m): sc-45735-SH, Biglycan shRNA (h) Lentiviral Particles: sc-43633-V and Biglycan shRNA (m) Lentiviral Particles: sc-45735-V.

Molecular Weight of Biglycan: 45 kDa.

Positive Controls: Biglycan (h2): 293T Lysate: sc-128099 or Hep G2 cell lysate: sc-2227.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

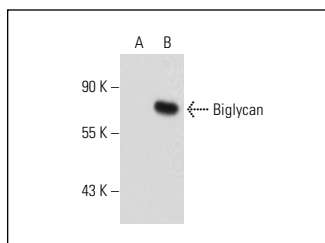
## STORAGE

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.

## DATA



Biglycan (3E2): sc-100857. Western blot analysis of Biglycan expression in non-transfected: sc-117752 (A) and human Biglycan transfected: sc-128099 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Kozma, E.M., et al. 2011. The role of Decorin and Biglycan dermatan sulfate chain(s) in fibrosis-affected fascia. *Glycobiology* 21: 1301-1316.
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- Barth, M., et al. 2019. Degenerative aortic valve disease and diabetes: implications for a link between proteoglycans and diabetic disorders in the aortic valve. *Diab. Vasc. Dis. Res.* 16: 254-269.
- Lorente-Gea, L., et al. 2020. Heparan sulfate proteoglycans undergo differential expression alterations in Alzheimer disease brains. *J. Neuropathol. Exp. Neurol.* 79: 474-483.
- Fujiwara-Tani, R., et al. 2020. Diabetes mellitus is associated with liver metastasis of colorectal cancer through production of Biglycan-rich cancer stroma. *Oncotarget* 11: 2982-2994.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.