# SANTA CRUZ BIOTECHNOLOGY, INC.

# 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  $\mu g~lg G_{2a}$  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-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ 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, \*\*D0 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 biot analysis of Biglycan expression in non-transfected: sc-117752 (**A**) and human Biglycan transfected: sc-128099 (**B**) 293T whole cell lysates.

#### SELECT PRODUCT CITATIONS

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- 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.
- Azimzadeh, O., et al. 2021. Activation of PPARα by fenofibrate attenuates the effect of local heart high dose irradiation on the mouse cardiac proteome. Biomedicines 9: 1845.
- Saha, A., et al. 2021. A necessary role for increased Biglycan expression during L1-mediated colon cancer progression. Int. J. Mol. Sci. 23: 445.

## PROTOCOLS

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