

# spectrin $\beta$ III (4D9): sc-293284

## BACKGROUND

Spectrin is an Actin binding protein that is a major component of the plasma membrane skeleton. Spectrins function as membrane organizers and stabilizers by forming dimers, tetramers and higher polymers. Spectrin  $\alpha$  and spectrin  $\beta$  are present in erythrocytes, whereas spectrin  $\alpha$  II (also designated fodrin  $\alpha$ ) and spectrin  $\beta$  I (also designated fodrin  $\beta$ ) are present in other somatic cells. The spectrin tetramers in erythrocytes act as barriers to lateral diffusion, but spectrin dimers seem to lack this function. Spectrin  $\beta$  III is highly homologous to both spectrin  $\beta$  I and spectrin  $\beta$  II. Western blot analysis shows that spectrin  $\beta$  III migrates at a higher molecular mass than predicted in the kidney. Spectrin  $\beta$  III is highly expressed in brain, kidney, pancreas, and liver, and at lower levels in lung and placenta. Specifically, spectrin  $\beta$  III constitutes a major component of the Golgi and vesicular membrane skeletons.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: SPTBN2 (human) mapping to 11q13.2; Sptbn2 (mouse) mapping to 19 A.

## SOURCE

spectrin  $\beta$  III (4D9) is a mouse monoclonal antibody raised against amino acids 643-720 of spectrin  $\beta$  III of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

spectrin  $\beta$  III (4D9) is recommended for detection of spectrin  $\beta$  III 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).

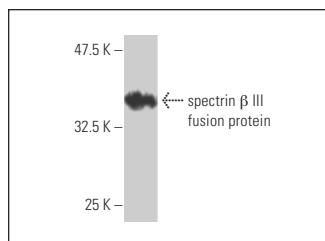
Suitable for use as control antibody for spectrin  $\beta$  III siRNA (h): sc-43432, spectrin  $\beta$  III siRNA (m): sc-43433, spectrin  $\beta$  III shRNA Plasmid (h): sc-43432-SH, spectrin  $\beta$  III shRNA Plasmid (m): sc-43433-SH, spectrin  $\beta$  III shRNA (h) Lentiviral Particles: sc-43432-V and spectrin  $\beta$  III shRNA (m) Lentiviral Particles: sc-43433-V.

Molecular Weight of spectrin  $\beta$  III: 246 kDa.

## 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).

## DATA



spectrin  $\beta$  III (4D9): sc-293284. Western blot analysis of human recombinant spectrin  $\beta$  III fusion protein.

## 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](http://www.scbt.com) for detailed protocols and support products.