

spectrin β II (A-16): sc-26913

BACKGROUND

Spectrin is an actin-binding protein that is a major component of the cytoskeletal superstructure of the erythrocyte plasma membrane. Spectrins function as membrane organizers and stabilizers by forming dimers, tetramers and higher polymers. Spectrin α I and spectrin β I are present in erythrocytes, whereas spectrin α II (also designated fodrin α) and spectrin β II (also designated fodrin β) 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 β II, which is involved in secretion, interacts with calmodulin in a calcium-dependent manner and is thus a candidate for the calcium-dependent movement of the cytoskeleton at the membrane. The human SPTBN1 gene maps to chromosome 2p16.2 and encodes the nonerythroid form of β -spectrin.

REFERENCES

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2. Gardner, K. and Bennett, V. 1987. Modulation of spectrin-actin assembly by erythrocyte adducin. *Nature* 328: 359-362.
3. Coleman, T.R., et al. 1989. Functional diversity among spectrin isoforms. *Cell Motil. Cytoskeleton* 12: 225-247
4. Saxton, M.J. 1989. The spectrin network as a barrier to lateral diffusion in erythrocytes. A percolation analysis. *Biophys. J.* 55: 21-28.
5. Prchal, J.T., et al. 1990. Patterns of spectrin transcripts in erythroid and non-erythroid cells. *J. Cell. Physiol.* 144: 287-294.
6. Chang, J.G., et al. 1993. Cloning of a portion of the chromosomal gene and cDNA for human β -fodrin, the nonerythroid form of β -spectrin. *Genomics* 17: 287-293.
7. Ma, Y., et al. 1993. The complete amino acid sequence for brain β spectrin (β fodrin): relationship to globin sequences. *Brain Res. Mol. Brain Res.* 18: 87-99.

CHROMOSOMAL LOCATION

Genetic locus: SPTBN1 (human) mapping to 2p16.2; Spnb2 (mouse) mapping to 11 A3.3.

SOURCE

spectrin β II (A-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of spectrin β II of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-26913 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

spectrin β II (A-16) is recommended for detection of spectrin β II of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

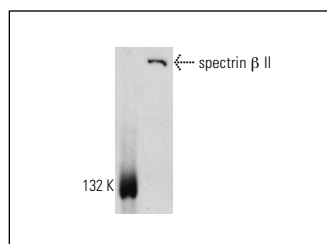
spectrin β II (A-16) is also recommended for detection of spectrin β II in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for spectrin β II siRNA (h): sc-36551, spectrin β II siRNA (m): sc-36552, spectrin β II shRNA Plasmid (h): sc-36551-SH, spectrin β II shRNA Plasmid (m): sc-36552-SH, spectrin β II shRNA (h) Lentiviral Particles: sc-36551-V and spectrin β II shRNA (m) Lentiviral Particles: sc-36552-V.

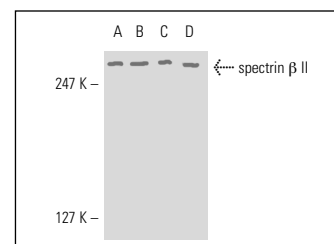
Molecular Weight of spectrin β II: 240/270 kDa.

Positive Controls: rat brain extract: sc-2392, mouse brain extract: sc-2253 or SK-N-SH cell lysate: sc-2410.

DATA



spectrin β II (A-16): sc-26913. Western blot analysis of spectrin β II expression in rat brain tissue extract.



spectrin β II (A-16): sc-26913. Western blot analysis of spectrin β II expression in SK-N-MC (A) and HeLa (B) whole cell lysates and rat cerebellum (C) and rat brain (D) tissue extracts.

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 or our catalog for detailed protocols and support products.



Try **spectrin β II (F-7): sc-515592** or **spectrin β II (F-11): sc-376487**, our highly recommended monoclonal alternatives to spectrin β II (A-16).