SANTA CRUZ BIOTECHNOLOGY, INC.

spectrin β II (C-19): sc-7468

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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 spectrin β.

CHROMOSOMAL LOCATION

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

SOURCE

spectrin β II (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of spectrin β II of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-7468 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

spectrin β II (C-19) 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 µg per 100-500 µg 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 (C-19) is also recommended for detection of spectrin β II in additional species, including canine, bovine, porcine and avian.

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.

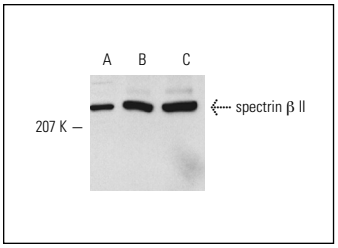
STORAGE

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

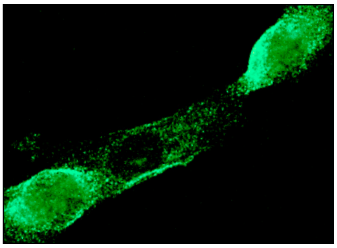
RESEARCH USE

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

DATA



spectrin β II (C-19): sc-7468. Western blot analysis of spectrin β II expression in SK-N-SH whole cell lysate (**A**) and mouse (**B**) and rat (**C**) brain extracts.



spectrin β II (C-19): sc-7468. Immunofluorescence staining of methanol-fixed SK-N-SH cells showing membrane and cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Di Giaimo, R., et al. 2002. New insights into the molecular basis of progressive myoclonus epilepsy: a multiprotein complex with cystatin B. Hum. Mol. Genet. 11: 2941-2950.
2. Mizutani, C., et al. 2002. Sustained activation of MEK1-ERK1/2 pathway in membrane skeleton occurs dependently on cell adhesion in megakaryocytic differentiation. Biochem. Biophys. Res. Commun. 297: 664-671.
3. Silva, E. and Soares-da-Silva, P. 2009. Protein cytoskeleton and overexpression of Na^+,K^+-ATPase in opossum kidney cells. J. Cell. Physiol. 221: 318-324.
4. Erdozain, A.M., et al. 2014. Alcohol-related brain damage in humans. PLoS ONE 9: e93586.

PROTOCOLS

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