spectrin β II (F-7): sc-515592

**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 encodes the nonerythroid form of β-spectrin.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: SPTBN1 (human) mapping to 2p16.2; Sptbn1 (mouse) mapping to 11 A3.3.

**SOURCE**

spectrin β II (F-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2341-2363 at the C-terminus of spectrin β II of human origin.

**PRODUCT**

Each vial contains 200 µg IgG κ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Blocking peptide available for competition studies, sc-515592 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

spectrin β II (F-7) is recommended for detection of spectrin β II of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for spectrin β II siRNA (h): sc-36551, spectrin β II siRNA (m2): sc-270043, spectrin β II shRNA Plasmid (h): sc-36551-SH, spectrin β II shRNA Plasmid (m2): sc-270043-SH, spectrin β II shRNA (h) Lentiviral Particles: sc-36551-V and spectrin β II shRNA (m2) Lentiviral Particles: sc-270043-V.

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

Positive Controls: A-10 cell lysate: sc-3806, Caco-2 cell lysate: sc-2262 or HeLa whole cell lysate: sc-2200.

**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, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

**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 website at www.scbt.com for detailed protocols and support products.

---

**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 encodes the nonerythroid form of β-spectrin.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: SPTBN1 (human) mapping to 2p16.2; Sptbn1 (mouse) mapping to 11 A3.3.

**SOURCE**

spectrin β II (F-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2341-2363 at the C-terminus of spectrin β II of human origin.

**PRODUCT**

Each vial contains 200 µg IgG κ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Blocking peptide available for competition studies, sc-515592 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).