**BACKGROUND**

The SPA-1 (signal-induced proliferation-associated gene-1) protein is a principal Rap 1 GTPase-activating protein in the hematopoietic progenitors and peripheral T cells. The SPA-1 gene is normally expressed in fetal and adult lymphohematopoietic tissues. Various types of mitogenic stimulation increase SPA-1 mRNA expression in normal lymphocytes. SPA-1 disrupts LFA-1-ICAM1-mediated adhesive interactions and subsequent T cell-receptor triggering and IL-2 production, possibly through inhibition of Rap 1. Mice that are deficient for the SPA-1 gene develop age-dependent progression of T cell immunodeficiency followed by a spectrum of late onset myeloproliferative disorders, mimicking human chronic myeloid leukemia. SPA-1 also directly binds to AQP2 and plays a role in regulating AQP2 trafficking to the apical membrane.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: SIPA1 (human) mapping to 11q13.1; Sipa1 (mouse) mapping to 19 A.

**SOURCE**

SPA-1 (E-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 920-950 near the C-terminus of SPA-1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 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-166949 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

SPA-1 (E-6) is recommended for detection of SPA-1 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 SPA-1 siRNA (h): sc-45418, SPA-1 siRNA (m): sc-45419, SPA-1 shRNA Plasmid (h): sc-45418-SH, SPA-1 shRNA Plasmid (m): sc-45419-SH, SPA-1 shRNA (h) Lentiviral Particles: sc-45418-V and SPA-1 shRNA (m) Lentiviral Particles: sc-45419-V.

Molecular Weight of SPA-1: 130 kDa.

Positive Controls: Ramos cell lysate: sc-2216, SPA-1 (m): 293T Lysate: sc-123727 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® Hard-set Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

![Western blot analysis of SPA-1 expression in Ramos (B) whole cell lysates.](image1)

![Western blot analysis of SPA-1 expression in HeLa (A) and Ramos (B) whole cell lysates.](image2)

**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 for detailed protocols and support products.