SANTA CRUZ BIOTECHNOLOGY, INC.

SIT (G-8): sc-271202

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

T lymphocytes express several low molecular mass transmembrane adaptor proteins that recruit SH2 domain-containing intracellular molecules to the cell membrane via tyrosine-based signaling pathways. One such protein, SIT (SHP2 interacting transmembrane adaptor protein) is a disulfide-linked homodimeric glycoprotein that is expressed in lymphocytes. SIT is reduced to half its molecular mass via endoglycosidase treatment. It contains five potential tyrosine phosphorylation sites, suggesting a role in TCR-mediated recruitment of SH2 domain-containing intracellular signaling molecules to the plasma membrane. SIT interacts with SHP2 and also with the adaptor protein GRB2. In addition, it is a substrate for the Src protein kinases Fyn, Lck and ZAP-70.

REFERENCES

1. Marie-Cardine, A., et al. 1999. SHP2-interacting transmembrane adaptor protein (SIT), a novel disulfide-linked dimer regulating human T cell activation. J. Exp. Med. 189: 1181-1194.
2. Judd, B.A. and Koretzky, G.A. 2000. Antigen specific T lymphocyte activation. Rev. Immunogenet. 2: 164-174.
3. Zhang, W. and Samelson, L.E. 2000. The role of membrane-associated adaptors in T cell receptor signalling. Semin. Immunol. 12: 35-41.
4. Pfrepper, K.I., et al. 2001. Structural and functional dissection of the cytoplasmic domain of the transmembrane adaptor protein SIT (SHP2-interacting transmembrane adaptor protein). Eur. J. Immunol. 31: 1825-1836.
5. LocusLink Report (LocusID: 27240). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: SIT1 (human) mapping to 9p13.3.

SOURCE

SIT (G-8) is a mouse monoclonal antibody raised against amino acids 1-196 representing full length SIT of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SIT (G-8) is recommended for detection of SIT of 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 SIT siRNA (h): sc-45334, SIT shRNA Plasmid (h): sc-45334-SH and SIT shRNA (h) Lentiviral Particles: sc-45334-V.

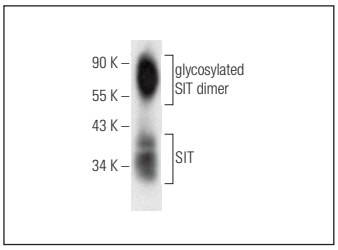
Molecular Weight of SIT: 40 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, H9 whole cell lysate: sc-364778 or Jurkat whole cell lysate: sc-2204.

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, UltraCruz® 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). 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



SIT (G-8): sc-271202. Western blot analysis of SIT expression in Jurkat whole cell lysate.

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.