

SWAP-70 (H-17): sc-10882

BACKGROUND

SWAP-70 is a protein that is part of a protein complex that catalyzes cell-free DNA recombination between immunoglobulin (Ig) heavy chain gene switch region substrates. In resting B lymphocytes, SWAP-70 is localized mainly in the cytoplasm, however, in activated B cells, SWAP-70 is recruited to the plasma membrane and then translocates to the nucleus. In the nucleus, SWAP-70 recognizes specific switch regions, acting as a switch recombinase and causing a DNA break. The cellular and intracellular localization before and after B-cell activation also suggests a role for SWAP-70 in signaling in B cell activation. In addition, SWAP-70 contains three nuclear localization signals, has a weak affinity for DNA, binds ATP, and forms specific, high affinity complexes with B23, C23, and poly (ADP-ribose) polymerase.

REFERENCES

1. Borggreffe, T., Wabl, M., Akhmedov, A.T., and Jessberger, R. 1998. A B-cell-specific DNA recombination complex. *J. Biol. Chem.* 273: 17025-17035.
2. Borggreffe, T., Masat, L., Wabl, M., Riwar, B., Cattoretti, G., and Jessberger, R. 1999. Cellular, intracellular, and developmental expression patterns of murine SWAP-70. *Eur. J. Immunol.* 29: 1812-1822.
3. Qi, C.F., Jessberger, R., Torrey, T.A., Taddesse-Heath, L., Ohta, Y., and Morse, H.C. 3rd. 1999. Differential regulation of germinal center genes, BCL6 and SWAP-70, during the course of MAIDS. *Mol. Immunol.* 36: 1043-1053.
4. Masat, L., Liddell, R.A., Mock, B.A., Kuo, W.L., Jessberger, R., Wabl, M., and Morse, H.C. 2000. Mapping of the SWAP-70 gene to mouse chromosome 7 and human chromosome 11p15. *Immunogenetics* 51: 16-19.
5. Masat, L., Caldwell, J., Armstrong, R., Khoshnevisan, H., Jessberger, R., Herndier, B., Wabl, M., and Ferric, D. 2000. Association of SWAP-70 with the B cell antigen receptor complex. *Proc. Natl. Acad. Sci.* 97: 2180-2184.

CHROMOSOMAL LOCATION

Genetic locus: SWAP70 (human) mapping to 11p15.4, DEF6 (human) mapping to 6p21.31; Swap70 (mouse) mapping to 7 F1, Def6 (mouse) mapping to 17 A3.3.

SOURCE

SWAP-70 (H-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SWAP-70 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-10882 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SWAP-70 (H-17) is recommended for detection of SWAP-70 and DEF6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SWAP-70 (H-17) is also recommended for detection of SWAP-70 and DEF6 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of SWAP-70: 70 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, Daudi cell lysate: sc-2415 or HeLa whole well lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 **SWAP-70 (F-3): sc-390431** or **SWAP-70 (Q-28): sc-81991**, our highly recommended monoclonal alternatives to SWAP-70 (H-17).