

3BP2 (h): 293T Lysate: sc-113954

BACKGROUND

3BP2 is a Syk family kinase-interacting protein (SKIP) that is expressed in spleen and peripheral blood leukocytes. 3BP2 was originally characterized as an Abl SH3-interacting protein, as it contains a single proline-rich domain and an SH2 domain, consistent with other adaptor molecules. In Jurkat T cells transfected with 3BP2, stimulation of T cell receptors (TCR) rapidly induces the redistribution of 3BP2 from the cytoplasm to the membrane, where it associates with the TCR protein tyrosine kinase complexes. Through this translocation, 3BP2 is able to selectively bind to Flt3/Flk2 receptors and to the phosphorylated Syk, LAT and ZAP-70 proteins. In T lymphocytes, the overexpression of 3BP2, specifically the overexpression of the SH2 and proline rich domains, is sufficient to induce the activation of several transcription factors, including NFAT and AP-1. This transactivation results in the upregulation of the IL-2 gene promoter and suggests a role for 3BP2 in mediating T cell signaling.

REFERENCES

1. Ren, R., Mayer, B.J., Cicchetti, P. and Baltimore, D. 1993. Identification of a ten-amino acid proline-rich SH3 binding site. *Science* 259: 1157-1161.
2. Songyang, Z., Shoelson, S.E., McGlade, J., Olivier, P., Pawson, T., Bustelo, X.R., Barbacid, M., Sabe, H., Hanafusa, H., Yi, T., et al. 1994. Specific motifs recognized by the SH2 domains of Csk, 3BP2, Fps/Fes, GRB2, HCP, Shc, Syk, and Vav. *Mol. Cell. Biol.* 14: 2777-2785.
3. Bell, S.M., Shaw, M., Jou, Y.S., Myers, R.M. and Knowles, M.A. 1997. Identification and characterization of the human homologue of SH3 BP2, an SH3 binding domain protein within a common region of deletion at 4p16.3 involved in bladder cancer. *Genomics* 44: 163-170.
4. Deckert, M., Tartare-Deckert, S., Hernandez, J., Rottapel, R. and Altman A. 1998. Adaptor function for the Syk kinases-interacting protein 3BP2 in IL-2 gene activation. *Immunity* 9: 595-605.
5. Shapiro, V.S., Mollenauer, M.N. and Weiss, A.J. 1998. Nuclear factor of activated T cells and AP-1 are insufficient for IL-2 promoter activation: requirement for CD28 upregulation of RE/AP. *J. Immunol.* 161: 6455-6458.

CHROMOSOMAL LOCATION

Genetic locus: SH3BP2 (human) mapping to 4p16.3.

PRODUCT

3BP2 (h): 293T Lysate represents a lysate of human 3BP2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

3BP2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive 3BP2 antibodies. Recommended use: 10-20 µl per lane.

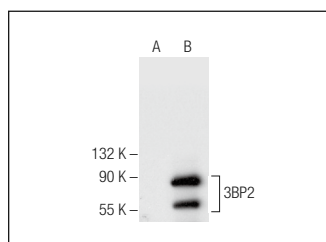
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

3BP2 (C-11): sc-377020 is recommended as a positive control antibody for Western Blot analysis of enhanced human 3BP2 expression in 3BP2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

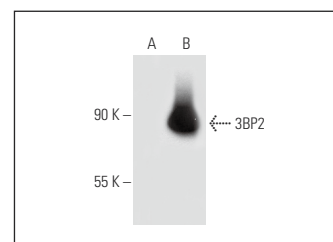
RECOMMENDED SUPPORT REAGENTS

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.

DATA



3BP2 (C-11): sc-377020. Western blot analysis of 3BP2 expression in non-transfected: sc-117752 (A) and human 3BP2 transfected: sc-113954 (B) 293T whole cell lysates.



3BP2 (470): sc-100640. Western blot analysis of 3BP2 expression in non-transfected: sc-117752 (A) and human 3BP2 transfected: sc-113954 (B) 293T whole cell lysates.

RESEARCH USE

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