

3BP2 (E-3): sc-166636

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/FIk2 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

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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 SH3BP2, 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; Sh3bp2 (mouse) mapping to 5 B2.

SOURCE

3BP2 (E-3) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of 3BP2 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.

STORAGE

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

APPLICATIONS

3BP2 (E-3) is recommended for detection of 3BP2 long and short isoforms 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 3BP2 siRNA (h): sc-40289, 3BP2 siRNA (m): sc-40290, 3BP2 shRNA Plasmid (h): sc-40289-SH, 3BP2 shRNA Plasmid (m): sc-40290-SH, 3BP2 shRNA (h) Lentiviral Particles: sc-40289-V and 3BP2 shRNA (m) Lentiviral Particles: sc-40290-V.

Molecular Weight (predicted) of 3BP2 isoforms: 62/11/65 kDa.

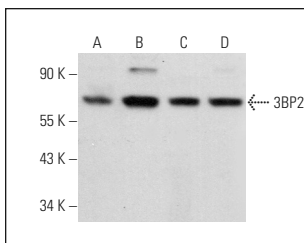
Molecular Weight (observed) of 3BP2: 65-80 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, 3BP2 (m): 293T Lysate: sc-117986 or MOLT-4 cell lysate: sc-2233.

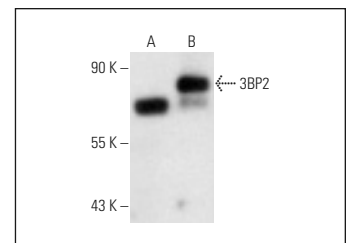
RECOMMENDED SUPPORT REAGENTS

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



3BP2 (E-3): sc-166636. Western blot analysis of 3BP2 expression in MOLT-4 (A), Raji (B), RT-4 (C) and A-431 (D) whole cell lysates.



3BP2 (E-3): sc-166636. Western blot analysis of 3BP2 expression in non-transfected: sc-117752 (A) and mouse 3BP2 transfected: sc-117986 (B) 293T whole cell lysates.

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.