

# BLNK (H-80): sc-15345

## BACKGROUND

Cross-linking of the B cell receptor (BCR) activates a variety of signaling pathways involved in processes such as cell proliferation and apoptosis. Intracellular protein tyrosine kinases such as Syk and Lyn have been implicated in this Bcr signal transduction and are thought to play an important role in B cell development. BLNK (for B cell linker protein) is a central linker protein in B cells which has been shown to associate with the effector proteins GRB2, Vav, Nck and PLC  $\gamma$  following activation of the B cell receptor. The two forms of BLNK, pp68 and pp70, arise from alternate splicing of the human BLNK gene transcript. BLNK is phosphorylated by the Syk tyrosine kinase, which in turn permits activation of downstream effector proteins including GRB2 and PLC  $\gamma$ .

## REFERENCES

- DeFranco, A.L. 1997. The complexity of signaling pathways activated by the BCR. *Curr. Opin. Immunol.* 9: 296-308.
- Kurosaki, T. 1997. Molecular mechanisms in B cell antigen receptor signaling. *Curr. Opin. Immunol.* 9: 309-318.

## CHROMOSOMAL LOCATION

Genetic locus: BLNK (human) mapping to 10q24.1; Blnk (mouse) mapping to 19 C3.

## SOURCE

BLNK (H-80) is a rabbit polyclonal antibody raised against amino acids 201-280 of BLNK of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

BLNK (H-80) is recommended for detection of BLNK p70 and BLNK p68 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BLNK (H-80) is also recommended for detection of BLNK p70 and BLNK p68 in additional species, including canine and porcine.

Suitable for use as control antibody for BLNK siRNA (h): sc-29810, BLNK siRNA (m): sc-29811, BLNK shRNA Plasmid (h): sc-29810-SH, BLNK shRNA Plasmid (m): sc-29811-SH, BLNK shRNA (h) Lentiviral Particles: sc-29810-V and BLNK shRNA (m) Lentiviral Particles: sc-29811-V.

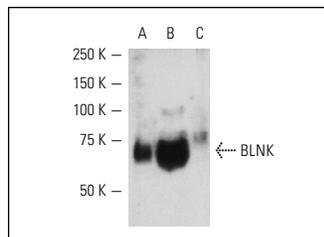
Molecular Weight of BLNK: 68/70 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, B220 whole cell lysate: sc-2207 or Ramos cell lysate: sc-2216.

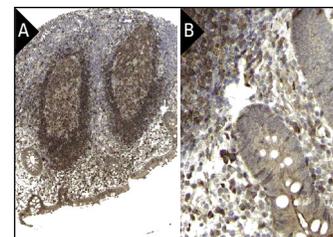
## STORAGE

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

## DATA



BLNK (H-80): sc-15345. Western blot analysis of BLNK expression in BJAB (A), Ramos (B) and HuT 78 (C) whole cell lysates.



BLNK (H-80): sc-15345. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells and lymphoid tissue at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

## SELECT PRODUCT CITATIONS

- Yankee, T.M., et al. 2003. Expression of the GRB2-related protein of the lymphoid system in B cell subsets enhances B cell antigen receptor signaling through mitogen-activated protein kinase pathways. *J. Immunol.* 170: 349-355.
- Yokozeki, T., et al. 2003. B cell receptor-mediated Syk-independent activation of phosphatidylinositol 3-kinase, Ras, and mitogen-activated protein kinase pathways. *J. Immunol.* 171: 1328-1335.
- Verma-Gaur, J., et al. 2012. Negative feedback regulation of antigen receptors through calmodulin inhibition of E2A. *J. Immunol.* 188: 6175-6183.
- Wang, X., et al. 2012. Down-regulation of B cell receptor signaling by hematopoietic progenitor kinase 1 (HPK1)-mediated phosphorylation and ubiquitination of activated B cell linker protein (BLNK). *J. Biol. Chem.* 287: 11037-11048.
- Ochiai, K., et al. 2012. A self-reinforcing regulatory network triggered by limiting IL-7 activates pre-BCR signaling and differentiation. *Nat. Immunol.* 13: 300-307.
- Hauser, J., et al. 2013. Broad feedback inhibition of pre-B-cell receptor signaling components. *Mol. Immunol.* 54: 247-253.

## RESEARCH USE

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


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Try **BLNK (2B11): sc-8003** or **BLNK (A-11): sc-514780**, our highly recommended monoclonal alternatives to BLNK (H-80). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **BLNK (2B11): sc-8003**.