

## BACKGROUND

BLNK is a cytoplasmic linker or adaptor protein that plays a critical role in B cell function and development. It functions as a central linker protein that bridges kinases associated with the B-cell receptor (BCR) with a multitude of signaling pathways.<sup>1</sup> The phosphorylation of five tyrosine residues is necessary for this protein to nucleate distinct signaling effectors following B cell receptor activation. It also plays a role in the activation of ERK/EPHB2, MAP kinase p38 and JNK, activation of NF- $\kappa$ B and NFAT, as well as AP1 activation. BLNK is an important regulator of BCR-mediated PLCG1 and PLCG2 activation and Ca<sup>2+</sup> mobilization and is required for trafficking of the BCR to late endosomes.<sup>2</sup> However; it does not seem to be required for pre-BCR-mediated activation of MAP kinase and phosphatidylinositol 3 (PI3) kinase signaling. It is critical in orchestrating the pro-B cell to pre-B cell transition and BCR-induced B-cell apoptosis. Mutations in this gene cause hypoglobulinemia and absent B cells, a disease in which the pro- to pre-B-cell transition is developmentally blocked. Deficiency in this protein has also been shown in some cases of pre-B acute lymphoblastic leukemia.<sup>3</sup>

### References:

1. Fu, C. et al: Immunity 9:93-103, 1998
2. Wienands, J. et al: J. Exp. Med. 188:791-5, 1998
3. Nakayama, J. et al: Blood 113:1483-92, 2009

## TECHNICAL INFORMATION

### Source:

BLNK Antibody is a mouse monoclonal antibody raised against recombinant human BLNK fragments expressed in *E. coli*.

### Specificity and Sensitivity:

This antibody detects BLNK proteins in various cell lysate.

**Storage Buffer:** PBS and 30% glycerol

### Storage:

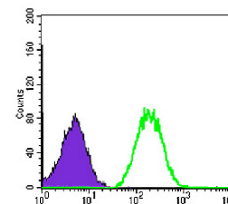
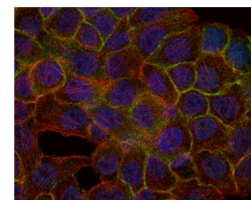
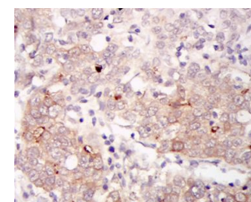
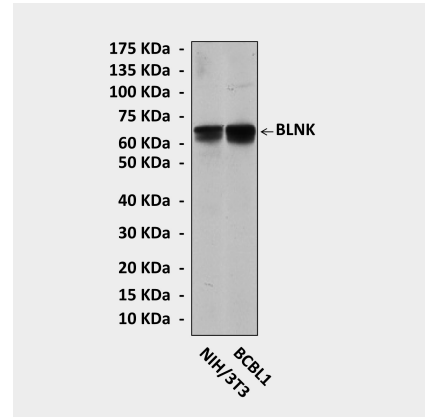
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

## APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	1:25-50
IHC (Paraffin)	1:50-200
ICC	1:50-200
FACS	1:50-200

*\*Optimal dilutions must be determined by end user.*

## QUALITY CONTROL DATA



**Top:** Western blot detection of BLNK proteins in BCBL-1 and NIH3T3 cell lysates using BLNK Antibody. **Middle Upper:** This antibody stains paraffin-embedded human cervical cancer tissue in IHC analysis. **Middle Lower:** It also stains HelpG2 cells in confocal immunofluorescent testing (BLNK antibody: Green; Actin filaments: Red; DRAQ-5 DNA Dye: Blue). **Bottom:** This antibody detects BLNK proteins specifically in NIH3T3 cells by FACS assay (BLNK antibody: Green; negative control: Purple).

