

BACKGROUND

The Src gene family has nine known members (Blk, c-Fgr, Fyn, Hck, Lck, Lyn, c-Src, c-Yes and Yrk), each encoding a cytoplasmic protein-tyrosine kinase (PTK) believed to be involved in signal transduction. These PTKs are expressed in a variety of cell types and participate in ligand-mediated signal transduction events. In B-lineage cells, multiple PTKs have been shown to be noncovalently coupled to membrane Ig-receptor complex, including p55blk, p59fyf, p53/56Lyn, and p56lck. More importantly, crosslinking of membrane immunoglobulin (mIg) by anti-Ig induces activation of these PTKs. One of the immediate consequences of PTK activation is tyrosine phosphorylation of several important intermediate effectors, such as phospholipase C-gamma, phosphatidylinositol 3-kinase, and GTPase activating protein, through which PTKs accomplish their role in signal transduction.¹ Blk is exclusively expressed in B cells and thymocytes but not in mature T cells.² Besides a role of Blk in B-cell receptor (BCR) signaling and B-cell development, the cellular functions of Blk are poorly defined. Expression of constitutively active Blk in the murine B-cell lineage results in increased proliferation of progenitor B cells and eventually development of B-lymphoid lymphomas. The oncogenic capacity of Blk is kinase dependent because lymphoid tumors do not develop in mice expressing a catalytically inactive form of Blk.³

References:

1. Parsons, S.J. & Parsons, J.T.: Oncogene 23:7906-9, 2004
2. Saouaf, S.J. et al: J. Biol. Chem. 270:27072-8, 1995
3. Dymecki, S.M. et al: Sciences 247:332-6, 1990

TECHNICAL INFORMATION

Source:

Blk antibody is a mouse monoclonal antibody raised against purified recombinant human Blk protein fragments expressed in *E. coli*.

Specificity and Sensitivity:

This antibody detects Blk proteins from B cell lysates without cross-reactivity with other family members.

Storage Buffer: PBS and 30% glycerol

Storage:

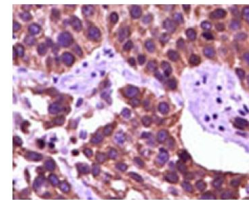
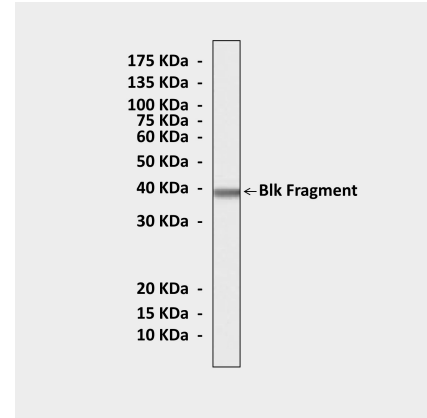
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:500-2000
IP	n/d
IHC	1:200-1000
ICC	n/d
FACS	n/d

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

QUALITY CONTROL DATA



Top: Western Blot detection of Blk protein fragments (predicted MW: 38 kDa) in bacterial lysate using Blk Antibody. **Bottom:** This antibody stains paraffin-embedded human lung carcinoma tissue in immunohistochemical analysis.

