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BLK Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1067a

Specification

BLK Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P51451
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**

Description
BLK (B lymphoid tyrosine kinase), with 505-amino acid protein (about 56KDa), belongs to the Src non-receptor tyrosine kinases family.Different subcellular localizations of Src-family kinases may be important for the regulation of specific cellular processes such as mitogenesis, cytoskeletal organization, and membrane trafficking.Blk is expressed exclusively by B lymphocytes and it is thought to function in a signal transductory pathway specific to this lineage. B lymphoid expression of an active Blk mutant caused proliferation of B progenitor cells and enhanced responsiveness of these cells to interleukin 7. Thus, sustained activation of Blk induces responses normally associated with the pre-BCR.

Immunogen
Purified recombinant fragment of BLK expressed in E. Coli.

Formulation
Ascitic fluid containing 0.03% sodium azide.

BLK Antibody - Additional Information

Gene ID 640

Other Names
Tyrosine-protein kinase Blk, 2.7.10.2, B lymphocyte kinase, p55-Blk, BLK

Dilution
WB~~1/500 - 1/2000
IHC~~1/200 - 1/1000

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
BLK Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

BLK Antibody - Protein Information

Name BLK

Function
Non-receptor tyrosine kinase involved in B-lymphocyte development, differentiation and signaling (By similarity). B-cell receptor (BCR) signaling requires a tight regulation of several protein tyrosine kinases and phosphatases, and associated coreceptors (By similarity). Binding of antigen to the B-cell antigen receptor (BCR) triggers signaling that ultimately leads to B-cell activation (By similarity). Signaling through BLK plays an important role in transmitting signals through surface immunoglobulins and supports the pro-B to pre-B transition, as well as the signaling for growth arrest and apoptosis downstream of B-cell receptor (By similarity). Specifically binds and phosphorylates CD79A at 'Tyr-188'and 'Tyr-199', as well as CD79B at 'Tyr-196' and 'Tyr-207' (By similarity). Phosphorylates also the immunoglobulin G receptors FCGR2A, FCGR2B and FCGR2C (PubMed:8756631). With FYN and LYN, plays an essential role in pre-B-cell receptor (pre-BCR)-mediated NF-kappa-B activation (By similarity). Contributes also to BTK activation by indirectly stimulating BTK intramolecular autophosphorylation (By similarity). In pancreatic islets, acts as a modulator of beta-cells function through the up-regulation of PDX1 and NKX6-1 and consequent stimulation of insulin secretion in response to glucose (PubMed:19667185). Phosphorylates CGAS, promoting retention of CGAS in the cytosol (PubMed:30356214).

Cellular Location
Cell membrane; Lipid-anchor. Note=Present and active in lipid rafts. Membrane location is required for the phosphorylation of CD79A and CD79B (By similarity).

Tissue Location
Expressed in lymphatic organs, pancreatic islets, Leydig cells, striate ducts of salivary glands and hair follicles

BLK Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

BLK Antibody - Images

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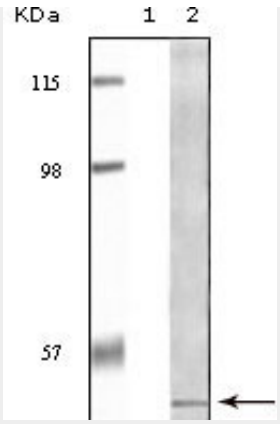

Figure 1: Western blot analysis using BLK mouse mAb against truncated BLK recombinant protein Raji cell lysate.

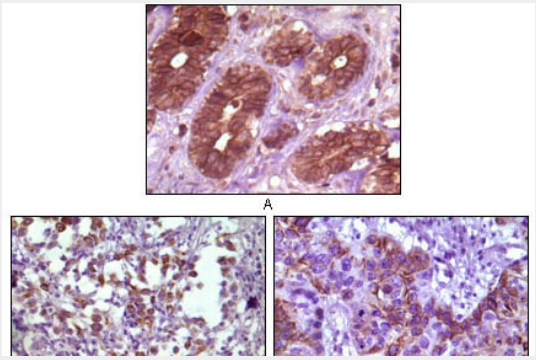

Figure 2: Immunohistochemical analysis of paraffin-embedded human breast tissue (A), lymph tissue (B) and skin carcinoma (C), showing membrane localization using BLK mouse mAb with DAB staining.

BLK Antibody - References

1. Theresa Tretter, Ashley E. Ross, Dominic I. Dordai. J. Exp. Med., Dec 2003; 198: 1863.