

# BLK Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO1071a

## Product Information

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<b>Application</b>	WB, IHC, E
<b>Primary Accession</b>	<a href="#">P51451</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone Names</b>	9D10B7H6; 9D10A8F8
<b>Isotype</b>	IgG1
<b>Calculated MW</b>	57706
<b>Description</b>	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 transducing 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.
<b>Immunogen</b>	Purified recombinant fragment of BLK expressed in E. Coli.
<b>Formulation</b>	Ascitic fluid containing 0.03% sodium azide.

## Additional Information

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<b>Gene ID</b>	640
<b>Other Names</b>	Tyrosine-protein kinase Blk, 2.7.10.2, B lymphocyte kinase, p55-Blk, BLK
<b>Dilution</b>	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~N/A
<b>Storage</b>	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.
<b>Precautions</b>	BLK Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	BLK
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<b>Function</b>	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). Also phosphorylates the immunoglobulin G receptors FCGR2A, FCGR2B and FCGR2C (PubMed: <a href="#">8756631</a> ). With FYN and LYN, plays an essential role in pre-B- cell receptor (pre-BCR)-mediated NF-kappa-B activation (By similarity). Also contributes 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: <a href="#">19667185</a> ). Phosphorylates CGAS, promoting retention of CGAS in the cytosol (PubMed: <a href="#">30356214</a> ).
<b>Cellular Location</b>	Cell membrane; Lipid-anchor. Note=Present and active in lipid rafts. Membrane location is required for the phosphorylation of CD79A and CD79B (By similarity).
<b>Tissue Location</b>	Expressed in lymphatic organs, pancreatic islets, Leydig cells, striate ducts of salivary glands and hair follicles

## References

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

## Images

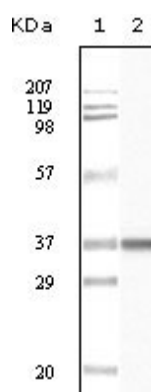


Figure 1: Western blot analysis using BLK mouse mAb against truncated BLK recombinant protein.

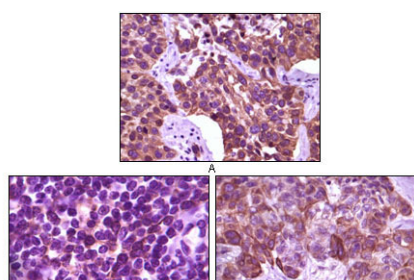


Figure 2: Immunohistochemical analysis of paraffin-embedded human lung carcinoma (A), lymph tissue (B) and skin carcinoma (C), showing membrane localization using BLK mouse mAb with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.