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BLK Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1067a

Product Information

Application	WB, IHC, E
Primary Accession	P51451
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	9D10B7
Isotype	IgG1
Calculated MW	57706
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.

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 E~~N/A
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.

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). Also phosphorylates 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). 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: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

References

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

Images

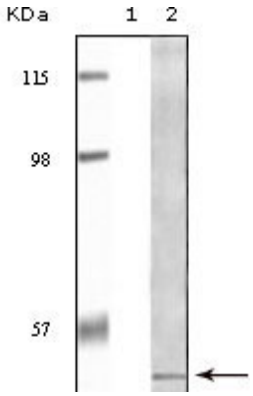


Figure 1: Western blot analysis using BLK mouse mAb against truncated BLK recombinant protein Raji cell lysate.

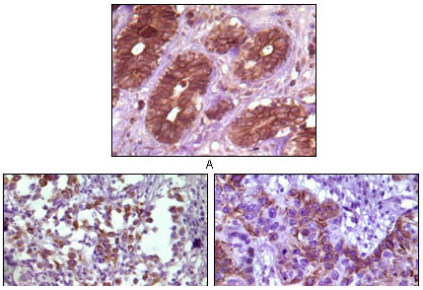


Figure 2: Immunohistochemical analysis of paraffin-embedded human breast tissue (A), lymph tissue (B) and skin carcinoma (C), showing membrane localization using BLK mouse mAb with DAB staining.

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