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BLK Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7697a

Product Information

Application	WB, IHC-P, E
Primary Accession	P51451
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB03107
Calculated MW	57706
Antigen Region	1-30

Additional Information

Gene ID	640
Other Names	Tyrosine-protein kinase Blk, B lymphocyte kinase, p55-Blk, BLK
Target/Specificity	This BLK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human BLK.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	BLK Antibody (N-term) 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

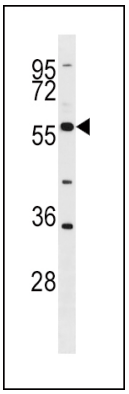
Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The STE group (homologs of yeast Sterile 7, 11, 20 kinases) consists of 50 kinases related to the mitogen-activated protein kinase (MAPK) cascade families (Ste7/MAP2K, Ste11/MAP3K, and Ste20/MAP4K). MAP kinase cascades, consisting of a MAPK and one or more upstream regulatory kinases (MAPKKs) have been best characterized in the yeast pheromone response pathway. Pheromones bind to Ste cell surface receptors and activate yeast MAPK pathway.

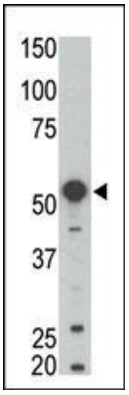
References

Islam, K.B., et al., J. Immunol. 154(3):1265-1272 (1995).
Drebin, J.A., et al., Oncogene 10(3):477-486 (1995).

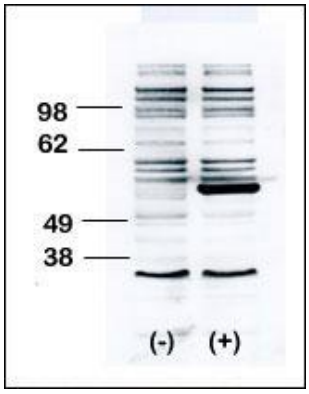
Images



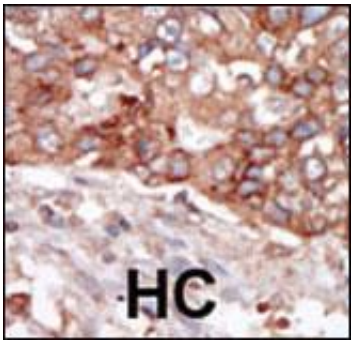
BLK Antibody (G1) (Cat. #AP7697a) western blot analysis in HL-60 cell line lysates (35ug/lane).This demonstrates the BLK antibody detected the BLK protein (arrow).



Western blot analysis of anti-BLK Pab (Cat. #AP7697a) in mouse kidney tissue lysate. BLK (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Western blot analysis of anti-BLK Pab (Cat. #AP7697a) transiently transfected HEK-293 cell line lysate (1ug/lane). BLK pab(arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

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