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BLK Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1487a

Product Information

Application	WB, FC, ICC, E
Primary Accession	P51451
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1E6
Isotype	IgG1
Calculated MW	57706
Description	Blk is a Src family protein tyrosine kinase expressed in all stages of B cell development . Activation of B cells by various ligands is accompanied by activation of Blk . It has been suggested that Blk is involved in the control of B cell differentiation and proliferation . Blk transcripts have also been detected in human thymocytes, but not in mature T cells, implicating that Blk may play an important role in thymopoiesis . Blk function may be redundant, however, as mice that do not express Blk are not impaired with respect to B cell development and immune response .
Immunogen	Purified recombinant fragment of human 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 FC~~1/200 - 1/400 ICC~~N/A 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. N Engl J Med. 2008 Feb 28;358(9):900-9. 2. Genes Immun. 2009 Apr;10(3):219-26. 3. Proc Natl Acad Sci U S A. 2009 Aug 25;106(34):14460-5.

Images

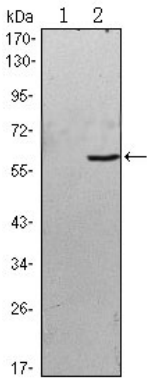
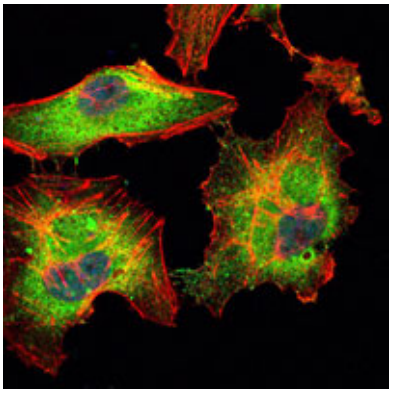


Figure 1: Western blot analysis using BLK mAb against HEK293 (1) and BLK(AA: 2-200)-hIgGFc transfected HEK293 (2) cell lysate.

Figure 2: Immunofluorescence analysis of Hela cells using BLK mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



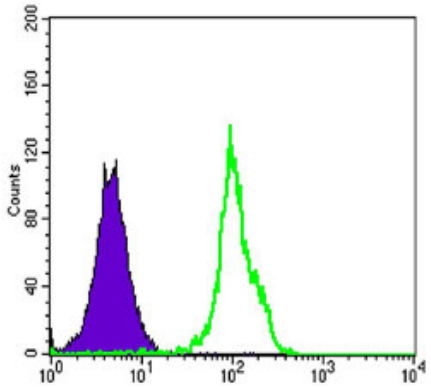


Figure 3: Flow cytometric analysis of HL-60 cells using BLK mouse mAb (green) and negative control (purple).

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