

ARG55747 anti-BTK antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes BTK
Tested Reactivity	Hu
Predict Reactivity	Ms
Tested Application	ICC/IF, WB
Specificity	Multiple isoforms of BTK are known to exist.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	BTK
Immunogen	Synthetic peptide (16 aa) within aa. 20-70 of Human BTK
Conjugation	Un-conjugated
Alternate Names	Bruton tyrosine kinase; AGMX1; IMD1; PSCTK1; BPK; ATK; XLA; B-cell progenitor kinase; AT; Tyrosine-protein kinase BTK; Agammaglobulinemia tyrosine kinase; EC 2.7.10.2

Application Instructions

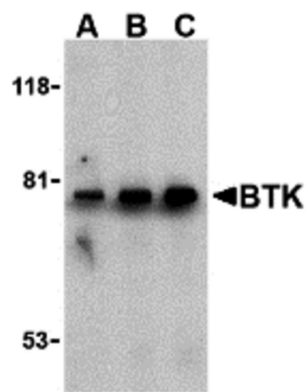
Application table	Application	Dilution
	ICC/IF	10 µg/ml
	WB	2 µg/ml
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	U937 Cell Lysate	

Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS and 0.02% Sodium azide
Preservative	0.02% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

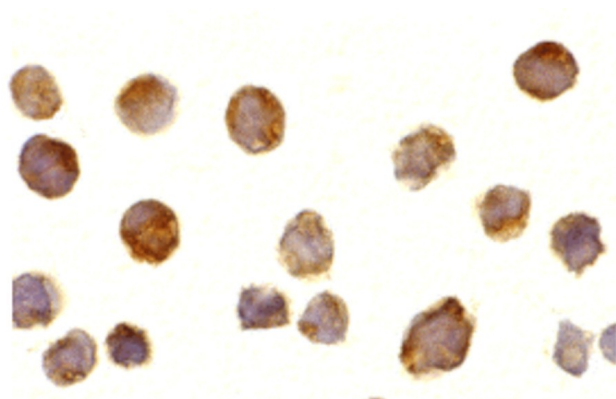
Bioinformation

Database links	GeneID: 695 Human Swiss-port # Q06187 Human
Gene Symbol	BTK
Gene Full Name	Bruton agammaglobulinemia tyrosine kinase
Background	The protein encoded by this gene plays a crucial role in B-cell development. Mutations in this gene cause X-linked agammaglobulinemia type 1, which is an immunodeficiency characterized by the failure to produce mature B lymphocytes, and associated with a failure of Ig heavy chain rearrangement. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Dec 2013]
Function	Non-receptor tyrosine kinase indispensable for B lymphocyte development, differentiation and signaling. Binding of antigen to the B-cell antigen receptor (BCR) triggers signaling that ultimately leads to B-cell activation. After BCR engagement and activation at the plasma membrane, phosphorylates PLCG2 at several sites, igniting the downstream signaling pathway through calcium mobilization, followed by activation of the protein kinase C (PKC) family members. PLCG2 phosphorylation is performed in close cooperation with the adapter protein B-cell linker protein BLNK. BTK acts as a platform to bring together a diverse array of signaling proteins and is implicated in cytokine receptor signaling pathways. Plays an important role in the function of immune cells of innate as well as adaptive immunity, as a component of the Toll-like receptors (TLR) pathway. The TLR pathway acts as a primary surveillance system for the detection of pathogens and are crucial to the activation of host defense. Especially, is a critical molecule in regulating TLR9 activation in splenic B-cells. Within the TLR pathway, induces tyrosine phosphorylation of TIRAP which leads to TIRAP degradation. BTK plays also a critical role in transcription regulation. Induces the activity of NF-kappa-B, which is involved in regulating the expression of hundreds of genes. BTK is involved on the signaling pathway linking TLR8 and TLR9 to NF-kappa-B. Transiently phosphorylates transcription factor GTF2I on tyrosine residues in response to BCR. GTF2I then translocates to the nucleus to bind regulatory enhancer elements to modulate gene expression. ARID3A and NFAT are other transcriptional target of BTK. BTK is required for the formation of functional ARID3A DNA-binding complexes. There is however no evidence that BTK itself binds directly to DNA. BTK has a dual role in the regulation of apoptosis. [UniProt]
Calculated Mw	76 kDa
PTM	Following B-cell receptor (BCR) engagement, translocates to the plasma membrane where it gets phosphorylated at Tyr-551 by LYN and SYK. Phosphorylation at Tyr-551 is followed by autophosphorylation of Tyr-223 which may create a docking site for a SH2 containing protein. Phosphorylation at Ser-180 by PRKCB, leads in translocation of BTK back to the cytoplasmic fraction. Phosphorylation at Ser-21 and Ser-115 creates a binding site for PIN1 at these Ser-Pro motifs, and promotes it's recruitment.



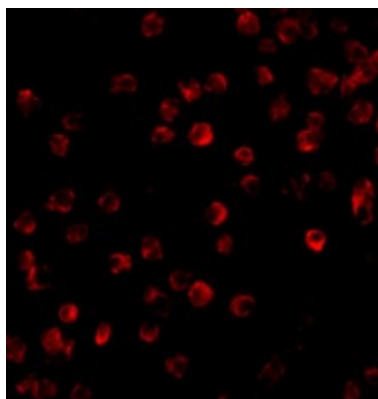
ARG55747 anti-BTK antibody WB image

Western blot: U937 cell lysate stained with ARG55747 anti-BTK antibody at (A) 0.5, (B) 1, and (C) 2 µg/ml dilution.



ARG55747 anti-BTK antibody ICC/IF image

Immunocytochemistry: Daudi cells stained with ARG55747 anti-BTK antibody at 10 µg/ml dilution.



ARG55747 anti-BTK antibody ICC/IF image

Immunofluorescence: Daudi cells stained with ARG55747 anti-BTK antibody at 10 µg/ml dilution.