

BTK Antibody (Ascites)
Mouse Monoclonal Antibody (Mab)
Catalog # AM2062a

Specification

BTK Antibody (Ascites) - Product Information

| | |
|-------------------|-----------------------------|
| Application | WB,E |
| Primary Accession | Q06187 |
| Other Accession | NP_000052.1 |
| Reactivity | Human |
| Host | Mouse |
| Clonality | Monoclonal |
| Isotype | IgG1 |
| Calculated MW | 76281 |
| Antigen Region | 209-239 |

BTK Antibody (Ascites) - Additional Information

Gene ID 695

Other Names

Tyrosine-protein kinase BTK, Agammaglobulinemia tyrosine kinase, ATK, B-cell progenitor kinase, BPK, Bruton tyrosine kinase, BTK, AGMX1, ATK, BPK

Target/Specificity

This BTK antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 209-239 amino acids from human BTK.

Dilution

WB~~1:2000~8000

Format

Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.

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

BTK Antibody (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

BTK Antibody (Ascites) - Protein Information

Name BTK

Synonyms AGMX1, ATK, BPK

Function Non-receptor tyrosine kinase indispensable for B lymphocyte development, differentiation and signaling (PubMed:[19290921](#)). Binding of antigen to the B-cell antigen receptor (BCR) triggers signaling that ultimately leads to B-cell activation (PubMed:[19290921](#)). 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 (PubMed:[11606584](#)). PLCG2 phosphorylation is performed in close cooperation with the adapter protein B-cell linker protein BLNK (PubMed:[11606584](#)). BTK acts as a platform to bring together a diverse array of signaling proteins and is implicated in cytokine receptor signaling pathways (PubMed:[16517732](#), PubMed:[17932028](#)). 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 (PubMed:[16517732](#)). The TLR pathway acts as a primary surveillance system for the detection of pathogens and are crucial to the activation of host defense (PubMed:[16517732](#)). Especially, is a critical molecule in regulating TLR9 activation in splenic B-cells (PubMed:[16517732](#), PubMed:[17932028](#)). Within the TLR pathway, induces tyrosine phosphorylation of TIRAP which leads to TIRAP degradation (PubMed:[16415872](#)). BTK also plays a critical role in transcription regulation (PubMed:[19290921](#)). Induces the activity of NF- kappa-B, which is involved in regulating the expression of hundreds of genes (PubMed:[19290921](#)). BTK is involved on the signaling pathway linking TLR8 and TLR9 to NF-kappa-B (PubMed:[19290921](#)). Acts as an activator of NLRP3 inflammasome assembly by mediating phosphorylation of NLRP3 (PubMed:[34554188](#)). Transiently phosphorylates transcription factor GTF2I on tyrosine residues in response to BCR (PubMed:[9012831](#)). GTF2I then translocates to the nucleus to bind regulatory enhancer elements to modulate gene expression (PubMed:[9012831](#)). ARID3A and NFAT are other transcriptional target of BTK (PubMed:[16738337](#)). BTK is required for the formation of functional ARID3A DNA-binding complexes (PubMed:[16738337](#)). There is however no evidence that BTK itself binds directly to DNA (PubMed:[16738337](#)). BTK has a dual role in the regulation of apoptosis (PubMed:[9751072](#)). Plays a role in STING1- mediated induction of type I interferon (IFN) response by phosphorylating DDX41 (PubMed:[25704810](#)).

Cellular Location

Cytoplasm. Cell membrane; Peripheral membrane protein. Nucleus Membrane raft {ECO:0000250|UniProtKB:P35991}. Note=In steady state, BTK is predominantly cytosolic. Following B-cell receptor (BCR) engagement by antigen, translocates to the plasma membrane through its PH domain Plasma membrane localization is a critical step in the activation of BTK. A fraction of BTK also shuttles between the nucleus and the cytoplasm, and nuclear export is mediated by the nuclear export receptor CRM1.

Tissue Location

Predominantly expressed in B-lymphocytes.

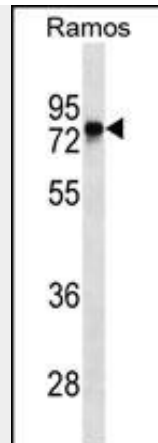
BTK Antibody (Ascites) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

BTK Antibody (Ascites) - Images





BTK Antibody (Cat. #AM2062a) western blot analysis in Ramos cell line lysates (35µg/lane). This demonstrates the BTK antibody detected the BTK protein (arrow).

BTK Antibody (Ascites) - 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.

BTK Antibody (Ascites) - References

Bailey, S.D., et al. *Diabetes Care* 33(10):2250-2253(2010)
Ng, Y.Y., et al. *Leukemia* 24(9):1617-1630(2010)
Segat, L., et al. *Vaccine* 28(10):2201-2206(2010)
Marcotte, D.J., et al. *Protein Sci.* 19(3):429-439(2010)
Liu, Z., et al. *J. Immunol.* 184(1):244-254(2010)