

Anti-BTK Antibody
Rabbit polyclonal antibody to BTK
Catalog # AP61107**Specification**

Anti-BTK Antibody - Product Information

| | |
|-------------------|---|
| Application | WB |
| Primary Accession | O06187 |
| Other Accession | P35991 |
| Reactivity | Human, Mouse, Rat, Monkey, Bovine, Dog |
| Host | Rabbit |
| Clonality | Polyclonal |
| Calculated MW | 76281 |

Anti-BTK Antibody - Additional Information**Gene ID** 695**Other Names**

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

Target/Specificity

Recognizes endogenous levels of BTK protein.

Dilution

WB~~WB (1/500 - 1/1000)

Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage

Store at -20 °C. Stable for 12 months from date of receipt

Anti-BTK Antibody - 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](http://www.uniprot.org/citations/11606584)). PLCG2 phosphorylation is performed in close cooperation with the adapter protein B-cell linker protein BLNK (PubMed:[11606584](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/16517732), PubMed:[17932028](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/16517732)). Especially, is a critical molecule in regulating TLR9 activation in splenic B-cells (PubMed:[16517732](http://www.uniprot.org/citations/16517732), PubMed:[17932028](http://www.uniprot.org/citations/17932028)). Within the TLR pathway, induces tyrosine phosphorylation of TIRAP which leads to TIRAP degradation (PubMed:[16415872](http://www.uniprot.org/citations/16415872)). BTK also plays a critical role in transcription regulation (PubMed:[19290921](http://www.uniprot.org/citations/19290921)). Induces the activity of NF- kappa-B, which is involved in regulating the expression of hundreds of genes (PubMed:[19290921](http://www.uniprot.org/citations/19290921)). BTK is involved on the signaling pathway linking TLR8 and TLR9 to NF-kappa-B (PubMed:[19290921](http://www.uniprot.org/citations/19290921)). Acts as an activator of NLRP3 inflammasome assembly by mediating phosphorylation of NLRP3 (PubMed:[34554188](http://www.uniprot.org/citations/34554188)). Transiently phosphorylates transcription factor GTF2I on tyrosine residues in response to BCR (PubMed:[9012831](http://www.uniprot.org/citations/9012831)). GTF2I then translocates to the nucleus to bind regulatory enhancer elements to modulate gene expression (PubMed:[9012831](http://www.uniprot.org/citations/9012831)). ARID3A and NFAT are other transcriptional target of BTK (PubMed:[16738337](http://www.uniprot.org/citations/16738337)). BTK is required for the formation of functional ARID3A DNA-binding complexes (PubMed:[16738337](http://www.uniprot.org/citations/16738337)). There is however no evidence that BTK itself binds directly to DNA (PubMed:[16738337](http://www.uniprot.org/citations/16738337)). BTK has a dual role in the regulation of apoptosis (PubMed:[9751072](http://www.uniprot.org/citations/9751072)).

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

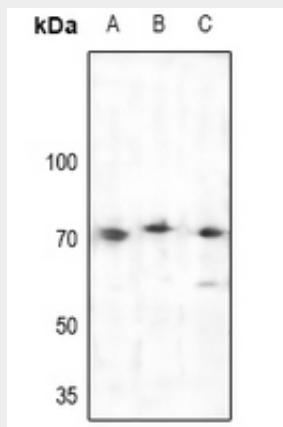
Predominantly expressed in B-lymphocytes.

Anti-BTK Antibody - 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](#)

Anti-BTK Antibody - Images



Western blot analysis of BTK expression in mouse liver (A), rat brain (B), rat liver (C) whole cell lysates.

Anti-BTK Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human BTK. The exact sequence is proprietary.