

# Anti-BTK Rabbit Monoclonal Antibody

Catalog # ABO13261

## Product Information

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|--------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Application</b>       | WB, IP                                                                                                |
| <b>Primary Accession</b> | <a href="#">Q06187</a>                                                                                |
| <b>Host</b>              | Rabbit                                                                                                |
| <b>Isotype</b>           | Rabbit IgG                                                                                            |
| <b>Reactivity</b>        | Human                                                                                                 |
| <b>Clonality</b>         | Monoclonal                                                                                            |
| <b>Format</b>            | Liquid                                                                                                |
| <b>Description</b>       | Anti-BTK Rabbit Monoclonal Antibody . Tested in WB, IP applications. This antibody reacts with Human. |

## Additional Information

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| <b>Gene ID</b>                  | 695                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Other Names</b>              | Tyrosine-protein kinase BTK, 2.7.10.2, Agammaglobulinemia tyrosine kinase, ATK, B-cell progenitor kinase, BPK, Bruton tyrosine kinase, BTK, AGMX1, ATK, BPK                                                                                                                                                                                                                                                                                             |
| <b>Calculated MW</b>            | 76281                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Application Details</b>      | WB 1:500-1:1000<br>IP 1:20                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Subcellular Localization</b> | Cytoplasm. Cell membrane; Peripheral membrane protein. Nucleus. 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. |
| <b>Tissue Specificity</b>       | Predominantly expressed in B-lymphocytes.                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Source</b>                   | Eukaryota                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Contents</b>                 | Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.                                                                                                                                                                                                                                                                                                                                     |
| <b>Clone Names</b>              | Clone: GOB-2                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Immunogen</b>                | A synthesized peptide derived from human BTK                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Purification</b>             | Affinity-chromatography                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Storage</b>                  | Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.                                                                                                                                                                                                                                                                                                              |

## Protein Information

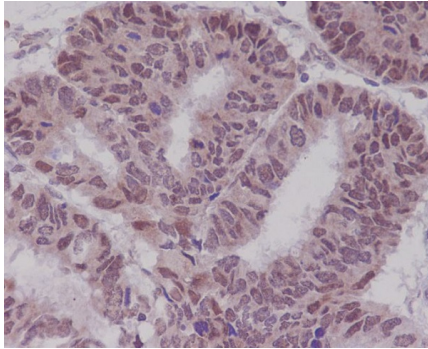
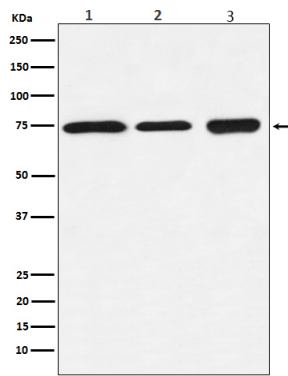
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| Name              | BTK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Synonyms          | AGMX1, ATK, BPK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Function          | <p>Non-receptor tyrosine kinase indispensable for B lymphocyte development, differentiation and signaling (PubMed:<a href="#">19290921</a>). Binding of antigen to the B-cell antigen receptor (BCR) triggers signaling that ultimately leads to B-cell activation (PubMed:<a href="#">19290921</a>). 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:<a href="#">11606584</a>). PLCG2 phosphorylation is performed in close cooperation with the adapter protein B-cell linker protein BLNK (PubMed:<a href="#">11606584</a>). BTK acts as a platform to bring together a diverse array of signaling proteins and is implicated in cytokine receptor signaling pathways (PubMed:<a href="#">16517732</a>, PubMed:<a href="#">17932028</a>). 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:<a href="#">16517732</a>). The TLR pathway acts as a primary surveillance system for the detection of pathogens and are crucial to the activation of host defense (PubMed:<a href="#">16517732</a>). Especially, is a critical molecule in regulating TLR9 activation in splenic B-cells (PubMed:<a href="#">16517732</a>, PubMed:<a href="#">17932028</a>). Within the TLR pathway, induces tyrosine phosphorylation of TIRAP which leads to TIRAP degradation (PubMed:<a href="#">16415872</a>). BTK also plays a critical role in transcription regulation (PubMed:<a href="#">19290921</a>). Induces the activity of NF-kappa-B, which is involved in regulating the expression of hundreds of genes (PubMed:<a href="#">19290921</a>). BTK is involved on the signaling pathway linking TLR8 and TLR9 to NF-kappa-B (PubMed:<a href="#">19290921</a>). Acts as an activator of NLRP3 inflammasome assembly by mediating phosphorylation of NLRP3 (PubMed:<a href="#">34554188</a>). Transiently phosphorylates transcription factor GTF2I on tyrosine residues in response to BCR (PubMed:<a href="#">9012831</a>). GTF2I then translocates to the nucleus to bind regulatory enhancer elements to modulate gene expression (PubMed:<a href="#">9012831</a>). ARID3A and NFAT are other transcriptional target of BTK (PubMed:<a href="#">16738337</a>). BTK is required for the formation of functional ARID3A DNA-binding complexes (PubMed:<a href="#">16738337</a>). There is however no evidence that BTK itself binds directly to DNA (PubMed:<a href="#">16738337</a>). BTK has a dual role in the regulation of apoptosis (PubMed:<a href="#">9751072</a>). Plays a role in STING1- mediated induction of type I interferon (IFN) response by phosphorylating DDX41 (PubMed:<a href="#">25704810</a>).</p> |
| Cellular Location | <p>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.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Tissue Location   | Predominantly expressed in B-lymphocytes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

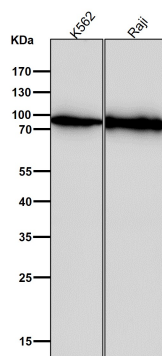
## Images

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Western blot analysis of BTK expression in (1) Daudi cell lysate; (2) Ramos cell lysate; (3) K562 cell lysate.



Immunohistochemical analysis of paraffin-embedded human gastric cancer, using BTK Antibody.



All lanes use the Antibody at 1:3K dilution for 1 hour at room temperature.

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