



# Btk Monoclonal Antibody

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalog No</b>                  | YP-Ab-14127                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Isotype</b>                     | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Reactivity</b>                  | Human;Monkey                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Applications</b>                | WB;IHC;IF;ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Gene Name</b>                   | BTK                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Immunogen</b>                   | Purified recombinant fragment of Btk expressed in E. Coli.                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Specificity</b>                 | Btk Monoclonal Antibody detects endogenous levels of Btk protein.                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Formulation</b>                 | Ascitic fluid containing 0.03% sodium azide,0.5% BSA, 50%glycerol.                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Source</b>                      | Monoclonal, Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Purification</b>                | Affinity purification                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Dilution</b>                    | Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/200 - 1/1000. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/10000. Not yet tested in other applications.                                                                                                                                                                                                                                                                                                               |
| <b>Concentration</b>               | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Purity</b>                      | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Storage Stability</b>           | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Synonyms</b>                    | Btk;Tyrosine-protein kinase BTK;AGMX1;ATK;BPK;Agammaglobulinaemia tyrosine kinase;B-cell progenitor kinase;Bruton tyrosine kinase                                                                                                                                                                                                                                                                                                                                           |
| <b>Observed Band</b>               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Calculated Molecular Weight</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Cell Pathway</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>Function</b>                    | catalytic activity:ATP + a [protein]-L-tyrosine = ADP + a [protein]-L-tyrosine phosphate.,cofactor:Binds 1 zinc ion per subunit.,disease:Defects in BTK are the cause of X-linked agammaglobulinemia (XLA) [MIM:300755]; also called X-linked agammaglobulinemia type 1 (AGMX1) or immunodeficiency type 1 (IMD1) . XLA is a humoral immunodeficiency disease which results in developmental defects in the maturation pathway of B-cells. Affected boys have normal levels |



of pre-B-cells in their bone marrow but virtually no circulating mature B-lymphocytes. This results in a lack of immunoglobulins of all classes and leads to recurrent bacterial infections like otitis, conjunctivitis, dermatitis, sinusitis in the first few years of life, or even some patients present overwhelming sepsis or meningitis, resulting in death in a few hours. Treatment in most cases is by infusion of intravenous immunoglobulin.,

**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],

**matters needing attention**

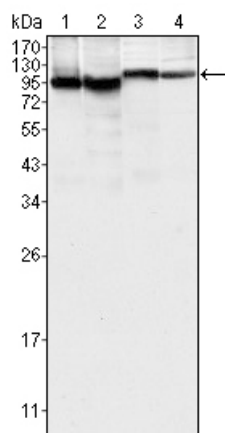
Avoid repeated freezing and thawing!

**Usage suggestions**

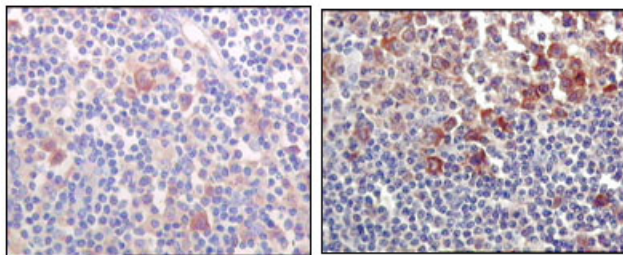
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



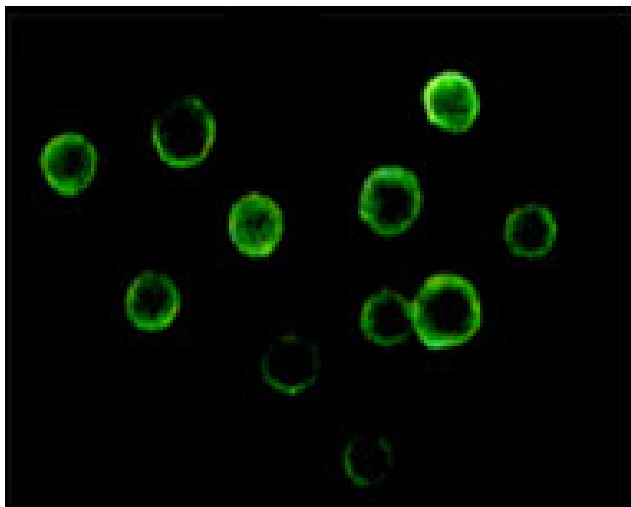
## Products Images



Western Blot analysis using Btk Monoclonal Antibody against K562 (1), MCF-7 (2), Jurkat (3) and HEK293 (4) cell lysate.



Immunohistochemistry analysis of paraffin-embedded human lymph-node tissues (left) and human lymph follicle tissues (right), showing cytoplasmic and membrane localization with DAB staining using Btk Monoclonal Antibody.



Immunofluorescence analysis of Jurkat cells using Btk Monoclonal Antibody.