

## BTK

**Reactivity:** Human Mouse Rat

**Tested applications:** WB IHC IF

**Recommended Dilution:** WB 1:500 - 1:2000 IHC 1:50 - 1:100 IF 1:50 - 1:100

**Calculated MW:** 76kDa

**Observed MW:** Refer to Figures

**Immunogen:**

Recombinant protein of human BTK

**Storage Buffer:**

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

**Concentration:**

b

**Synonym:**

AGMX1; AT; ATK; BPK; IMD1; MGC126261; MGC126262; PSCTK1; XLA;

**Catalog #:** A1576

**Antibody Type:**

Polyclonal Antibody

**Species:** Rabbit

**Gene ID:** 695

**Isotype:** IgG

**Swiss Prot:** Q06187

**Purity:** Affinity purification

For research use only.

**Background:**

Bruton's tyrosine kinase (Btk) is a member of the Btk/Tec family of cytoplasmic tyrosine kinases. Like other Btk family members, it contains a pleckstrin homology (PH) domain and Src homology SH3 and SH2 domains. Btk plays an important role in B cell development (1,2). Activation of B cells by various ligands is accompanied by Btk membrane translocation mediated by its PH domain binding to phosphatidylinositol-3,4,5-trisphosphate (3-5). The membrane-localized Btk is active and associated with transient phosphorylation of two tyrosine residues, Tyr551 and Tyr223. Tyr551 in the activation loop is transphosphorylated by the Src family tyrosine kinases, leading to autophosphorylation at Tyr223 within the SH3 domain, which is necessary for full activation (6,7). The activation of Btk is negatively regulated by PKC through phosphorylation of Btk at Ser180, which results in reduced membrane recruitment, transphosphorylation, and subsequent activation (8). The PKC inhibitory signal is likely to be a key determinant of the B cell receptor signaling threshold to maintain optimal Btk activity (8).

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