

## BTK Ab

Cat.#: DF6472  
Size: 100ul,200ul

Concn.: 1mg/ml  
Source: Rabbit

Mol.Wt.: 76kDa  
Clonality: Polyclonal

Application: WB 1:500-1:2000 IHC 1:50-1:200, IF/ICC 1:100-1:500

Reactivity: Human, Mouse, Rat

Purification: The antiserum was purified by peptide affinity chromatography using SulfoLink™ Coupling Resin (Thermo Fisher Scientific).

Specificity: BTK Ab detects endogenous levels of total BTK.

Immunogen: A synthesized peptide derived from human BTK.

Uniprot: Q06187

Description: 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 $\beta$  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).

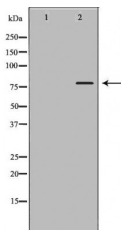
Subcellular Location: Cytoplasm. Membrane. Nucleus.

Tissue Specificity: Predominantly expressed in B-lymphocytes.

Similarity: The PH domain mediates the binding to inositol polyphosphate and phosphoinositides, leading to its targeting to the plasma membrane. It is extended in the BTK kinase family by a region designated the TH (Tec homology) domain, which consists of about 80 residues preceding the SH3 domain. Belongs to the protein kinase superfamily. Tyr protein kinase family. TEC subfamily.

## Storage Condition and Buffer:

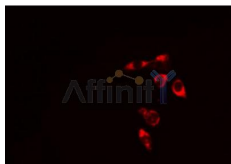
Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at -20 °C. Stable for 12 months from date of receipt.



Western blot analysis of extracts from Daudi, using BTK Ab. The lane on the left was treated with the antigen-specific peptide.



DF6472 at 1/100 staining Mouse liver tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the Ab for 1.5 hours at 22°C. An HRP conjugated goat anti-rabbit Ab was used as the secondary.



DF6472 staining HeLa cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25°C. The primary Ab was diluted at 1/200 and incubated with the sample for 1 hour at 37°C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab (Red), diluted at 1/600, was used as secondary Ab.

**IMPORTANT:** For western blot, incubate membrane with diluted primary Ab in 5% w/v milk , 1X TBS, 0.1% Tween@20 at 4°C with gentle shaking, overnight.

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