Data Sheet (Cat.No.TMAB-01397)

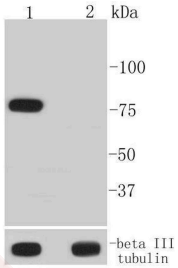
Anti-Phospho-BTK (Tyr223) Antibody (3S713)

Product Details

Ig Type:	IgG
Reactivity:	Human (predicted:Mouse)
Molecular Weight:	Theoretical: 76 kDa.
Clone:	3S713
Purification:	Protein A purified

Applications

Verified Activity:	Western blot analysis of Phospho-BTk (Y223) on different lysates using anti-Phospho-BTk (Y223) antibody at 1/1,000 dilution. Positive control: Lane 1: K562 cells treated with pervanadate Lane 2: Untreated K562 cell lysate



Application:	WB
Recommended	WB=1:1000-2000

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	KLH conjugated Synthesised phosphopeptide: human Btk around the phosphorylation site of Tyr223
Antigen Species:	Human
Gene ID:	695
Uniprot ID:	Q06187
Synonyms:	BTK (p-Y223);p-BTK (Tyr223);p-BTK (Y223);BTK (p-Tyr223)
Biology Area:	TLR Signaling,Tyrosine Kinases

Research Background

Brutons 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, Src homology SH3 and SH2 domains. BTK plays an

important role in B cell development. 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. The membrane located 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 kinase, leading to autophosphorylation at Tyr223 within the SH3 domain, which is necessary for full activation. 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. The PKC/BTK inhibitory signal is likely to be a key determinant of the B cell receptor signaling threshold to maintain optimal BTK activity.