Recombinant Phospho-BTK (Tyr551) Monoclonal Antibody

catalog number: **AN302103L**

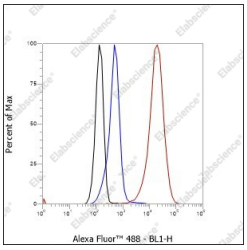
Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

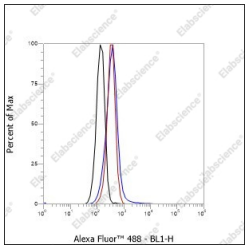
Reactivity	Human
Immunogen	Peptide. This information is proprietary to PTMab
Host	Rabbit
Isotype	Rabbit IgG
Clone	C301724
Purification	Protein A affinity purification
Conjugation	Unconjugated
Buffer	PBS, 50% glycerol, 0.05% Proclin 300, 0.05% protein protectant.

Applications	Recommended Dilution
FCM	1:100

Data



Flow cytometric analysis of human Phospho-BTK (Tyr551) expression on Ramos+pervanadate(1mM 30min) cells. Cells were stained with purified anti-Human Phospho-BTK (Tyr551), then a Alexa Fluor 488-conjugated second step antibody. The histogram were derived from events with the forward and side light-scatter characteristics of intact cells.



Flow cytometric analysis of human Phospho-BTK (Tyr551) expression on Ramos(Negative cell line) cells. Cells were stained with purified anti-Human Phospho-BTK (Tyr551), then a Alexa Fluor 488-conjugated second step antibody. The histogram were derived from events with the forward and side light-scatter characteristics of intact cells.

Preparation & Storage

Storage	Store at -20°C Valid for 12 months. Avoid freeze/thaw cycles.
Shipping	Ice bag

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 apleckstrin homology (PH) domain and Src homology SH3 and SH2 domains. Btk plays an important role in B cell development. Activation ofB cells by various ligands is accompanied by Btk membrane translocation mediated by its PH domain binding to phosphatidylinositol-3,4,5-trisphosphate. The membrane-localized Btk is active and associated with transient phosphorylation of two tyrosine residues, Tyr551 andTyr223. Tyr551 in the activation loop is transphosphorylated by the Src family tyrosine kinases, leading to autophosphorylation at Tyr223 withinthe SH3 domain, which is necessary for full activation. The activation of Btk is negatively regulated by PKCβ through phosphorylation of Btkat Ser180, which results in reduced membrane recruitment, transphosphorylation, and subsequent activation. The PKC inhibitory signal islikely to be a key determinant of the B cell receptor signaling threshold to maintain optimal Btk activity.

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