# **Technical Data Sheet**

# **Purified Mouse Anti-Human Btk**

### **Product Information**

 $\begin{tabular}{ll} \textbf{Material Number:} & \textbf{611116} \\ \textbf{Size:} & 50~\mu g \\ \textbf{Concentration:} & 250~\mu g/ml \\ \textbf{Clone:} & 53/BTK \\ \end{tabular}$ 

Immunogen: Human N-Terminal Btk aa. 2-172 Recombinant Protein

 Isotype:
 Mouse IgG2a

 Reactivity:
 QC Testing: Human

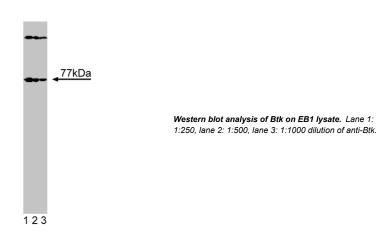
Target MW: 77 kDa

Storage Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium

azıde.

### Description

Bruton's tyrosine kinase (Btk) is a nonreceptor tyrosine kinase whose function is critical for proper B cell development and signaling. It is a member of the Tec family of kinases which includes Tec and Itk. In addition to an N-terminal pleckstrin homology (PH) domain, the Tec proteins contain Src homology domains 2 and 3 (SH2 and SH3) and a stretch of 60-80 amino acids between the PH and SH3 domains termed the Tec homology domain. The activity of Btk is regulated by Src-mediated phosphorylation of the kinase domain at tyrosine 551. This event induces Btk kinase activity and subsequent autophosphorylation at tyrosine 223 in the SH3 domain. Phosphorylated Btk then associates with the cell membrane via the interaction of the PH domain with phosphatidylinositol 3, 4, 5-triphosphate. The PH domain is essential for proper activation and function of Btk. A mutation in the PH domain results in Xid, murine X-linked immunodeficiency, and human X-linked agammaglobulinemia.



### **Preparation and Storage**

Store undiluted at -20° C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

## **Application Notes**

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

### **BD Biosciences**

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## **Suggested Companion Products**

Catalog Number	Name	Size	Clone	
611546	EB1 Cell Lysate	500 μg	(none)	
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal	
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)	

# **Product Notices**

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
- 4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

# References

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Shahan TA, Sorenson WG, Simpson J, Kefalides NA, Lewis DM. Tyrosine kinase activation in response to fungal spores is primarily dependent on endogenous reactive oxygen production in macrophages. *J Biol Chem.* 2000; 275(14):10175-10181.(Clone-specific: Immunoprecipitation, In vitro kinase assay, Western blot) Sideras P, Müller S, Shiels H. Genomic organization of mouse and human Bruton's agammaglobulinemia tyrosine kinase (Btk) loci. *J Immunol.* 1994; 153(12):5607-5617.(Biology)

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Yang W, Malek SN, Desiderio S. An SH3-binding site conserved in Bruton's tyrosine kinase and related tyrosine kinases mediates specific protein interactions in vitro and in vivo. *J Biol Chem.* 1995; 270(35):20832-20840.(Biology)

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