Technical Data Sheet

Purified Mouse anti-Btk (pY551)/Itk (pY511)

Product Information

Catalog Number:	**558034**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	24a/BTK (Y551)
Immunogen:	Phosphorylated Human Btk
Isotype:	Mouse IgG1 κ
Target Molecular Weight for WB/IP:	77 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

*B*ruton's *t*yrosine *k*inase (Btk) is a nonreceptor tyrosine kinase whose function is critical for proper B cell development and signaling. The activity of Btk is regulated by Src mediated phosphorylation of the kinase domain at tyrosine 551 (Y551). This event induces Btk kinase activity and subsequent autophosphorylation at Y223. Phosphorylated Btk then associates with the cell membrane via the interaction of the PH domain with phosphatidylinositol 3, 4, 5-triphosphate.

The Tec family kinase Itk plays a critical role in signal transduction downstream of the T cell antigen receptor and has been implicated in the activation of phospholipase C-γ1 (PLCγ1), a key regulator of calcium mobilization and extracellular signal-regulated kinase (ERK) activation. Itk is regulated by an activating transphosphorylation event in which Y511 in the kinase domain is phosphorylated by Lck.

The 24a/BTK (Y551) monoclonal antibody recognizes the Y551-phosphorylated form of human Btk and the Y511 phosphorylated form of human Itk.

Western blot analysis of Btk (pY551) in human Burkitt's lymphoma. *Lysates from control (panel A) and pervanadate-treated (panel B) Raji cells (ATCC CCL-86) were probed with Purified Mouse anti-Btk (pY551)/Itk (pY511) monoclonal antibody at concentrations of 0. 5, 0.25, and 0.125 µg/ml. Btk (pY551) is identified as a band of about 77 kDa in the treated cells.*

Preparation and Storage

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

Store undiluted at 4° C.

Application Notes

Application

Western blot	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)

Product Notices

1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

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2. 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.
3. Since applications vary, each investigator should titrate the reagent to obtain optimal results.

References

Mahajan S, Fargnoli J, Burkhardt AL, Kut SA, Saouaf SJ, Bolen JB. Src family protein tyrosine kinases induce autoactivation of Bruton's tyrosine kinase. *Mol Cell Biol.* 1995; 15:5304-5311. (Biology)

Rawlings DJ, Scharenberg AM, Park H, et al. Activation of BTK by a phosphorylation mechanism initiated by SRC family kinases. *Science.* 1996; 271:822-825. (Biology)

Wilcox HM, Berg LJ.. Itk phosphorylation sites are required for functional activity in primary T cells. *J Biol Chem.* 2003; 278:37112-37121. (Biology)