

Technical Data Sheet

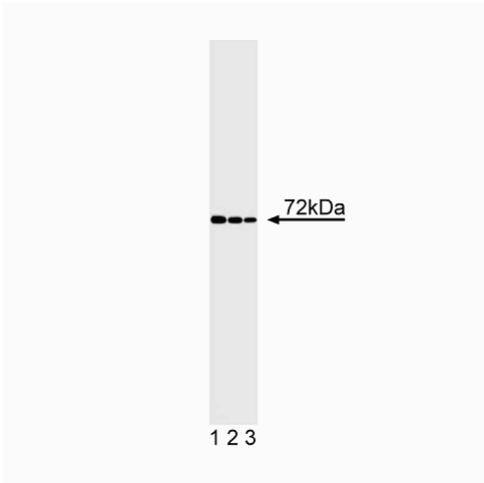
Purified Mouse Anti-Itk

Product Information

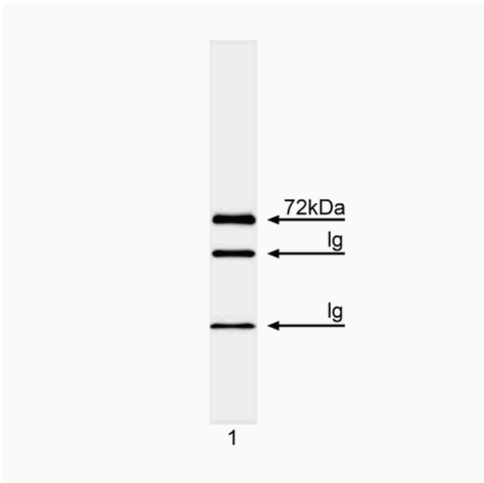
Material Number:	550503
Size:	50 µg
Concentration:	0.5 mg/ml
Clone:	2F12
Immunogen:	Fusion protein with aa. 1-26 of human/mouse Itk
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Mouse
Target MW:	72 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

Itk (IL-2 inducible tyrosine kinase) is a member of the TEC family of intracellular tyrosine kinases. Members of this family are characterized by their role in hematopoietic cell signaling. Itk is expressed primarily in T cells and has been shown to play a role in T-cell antigen receptor (TCR) mediated proliferation, interleukin-2 production, and T cell differentiation. Itk, following stimulation of the TCR becomes phosphorylated on tyrosine 511 by the Src kinase Lck resulting in increased *in vitro* Itk kinase activity. If phenylalanine is substituted for tyrosine at position 511, the *in vivo* kinase activity of Itk is drastically diminished, indicating that this site plays a key role in regulating Itk function. Itk migrates at ~72 kDa on SDS/PAGE. (SWISSPROT: Q08881)



Western blot analysis of Itk. Lysate from Jurkat cells was probed with anti-Itk (clone 2F12, Cat. No. 550503) at concentrations of 0.25 (lane 1), 0.125 (lane 2), and 0.06 µg/ml (lane 3). Itk is identified as a band at ~72 kDa.



Immunoprecipitation/western blot analysis of Itk. Lysates from Jurkat cells were first immunoprecipitated (2 µg/1 x 10⁶ cells) with anti-Itk (clone 2F12, Cat. No. 550503) and then the western blot was probed with the same antibody at a concentration of 0.5 µg/ml. Itk is identified as a band of ~72 kDa.

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
Immunoprecipitation	Tested During Development
In vitro kinase assay	Reported

Suggested Companion Products

Catalog Number	Name	Size	Clone
611451	Jurkat Cell Lysate	500 µg	(none)

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
3. 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

Heyeck SD, Wilcox HM, Bunnell SC, Berg LJ.. Lck phosphorylates the activation loop tyrosine of the Itk kinase domain and activates Itk kinase activity.. *J Biol Chem.* 1997; 272(25401).(Immunogen: Immunoprecipitation, In vitro kinase assay, Western blot)

Liu KQ, Bunnell SC, Gurniak CB, Berg LJ. T cell receptor-initiated calcium release is uncoupled from capacitative calcium entry in Itk-deficient T cells. *J Exp Med.* 1998; 187(10):1721-1727.(Clone-specific: Western blot)

Siliciano JD, Morrow TA, Desiderio SV. itk, a T-cell-specific tyrosine kinase gene inducible by interleukin 2. *Proc Natl Acad Sci U S A.* 1992; 89(23):11194-11198. (Biology)