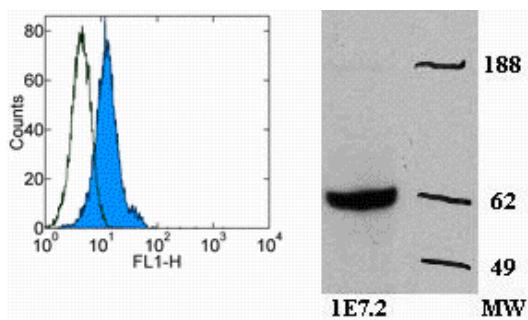


Anti-Human/Mouse ZAP-70 Purified

Catalog Number: 14-6695

Also Known As: ZAP70

RUO: For Research Use Only. Not for use in diagnostic procedures.



Left - Staining of permeabilized Jurkat cells with 0.5 ug of Mouse IgG1 kappa Isotype Control Purified (cat. 14-4714) (open histogram) or 0.5 ug of Anti-Human/Mouse ZAP-70 Purified (filled histogram) followed by Anti-Mouse IgG FITC (cat. 11-4011). Total cells were used for analysis. Right - Immunoblotting of Jurkat cell lysate from 5x10e7 cells/ml (probed with 2 ug/ml of Anti-Human/Mouse ZAP-70 Purified).

Product Information

Contents: Anti-Human/Mouse ZAP-70 Purified

REF **Catalog Number:** 14-6695

Clone: 1E7.2

Concentration: 0.5 mg/ml


Host/Isotype: Mouse IgG1, kappa

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer

 **Temperature Limitation:** Store at 2-8°C.

LOT **Batch Code:** Refer to Vial

 **Use By:** Refer to Vial

 **Caution, contains Azide**

Description

The 1E7.2 antibody reacts with human and mouse ZAP-70, the TCR ζ -associated protein-70. ZAP-70 is a cytosolic protein tyrosine kinase (PTK) and a member of the Syk family of proteins. It is expressed in T and NK cells and is required for TCR signaling and development. ZAP-70 interacts with the TCR complex by binding to tyrosine-phosphorylated immunoreceptor tyrosine-based activation motifs (ITAMs) present in the invariant subunits of the TCR complex. Following activation, ZAP-70 is phosphorylated on several tyrosine residues by two mechanisms; an autophosphorylation and a transphosphorylation by the Src family tyrosine kinase Lck1-3. Tyrosine phosphorylation of ZAP-70 correlates to its increased kinase activity and triggers downstream signaling events. Mutations in ZAP-70 have been shown to result in a form of Severe Combined Immunodeficiency Syndrome (SCID) in humans. 1E7.2 was generated against a KLH-peptide sequence corresponding to the human ZAP-70 amino acid residues 282-307. While ZAP-70 is normally expressed in T and NK cells, several recent studies have also shown high correlation of ZAP-70 positive expression with mutated IgVH expression in B-chronic lymphocytic leukemia (CLL). In conclusion, the expression of ZAP-70, which can be measured by intracellular flow cytometry, may serve as a prognostic marker for B-CLL.

Applications Reported

The 1E7.2 antibody has been reported for use in intracellular flow cytometric analysis, immunoprecipitation, and immunoblotting (WB). (Fluorochrome conjugated 1E7.2 is recommended for use in intracellular flow cytometry.) This product is for *in vitro* research use only. It is not to be used for commercial purposes. Use of this product to produce products for sale or for diagnostic, therapeutic or drug discovery purposes is prohibited. In order to obtain a license to use this product for commercial purposes, contact The Regents of the University of California.

Applications Tested

The 1E7.2 antibody has been tested by immunoblotting of mouse thymocyte and human Jurkat cell lysates. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

References

- Qian D, Lev S, van Oers NS, Dikic I, Schlessinger J, Weiss A. 1997. Tyrosine phosphorylation of Pyk2 is selectively regulated by Fyn during TCR signaling. *J Exp Med.* 185(7):1253-9.
- Qian D, Mollenauer MN, Weiss A. 1996. Dominant-negative zeta-associated protein 70 inhibits T cell antigen receptor signaling. *J Exp Med.* 183(2):611-20.
- Orchard JA, Ibbotson RE, Davis Z, Wiestner A, Rosenwald A, Thomas PW, Hamblin TJ, Staudt LM, Oscier DG. 2004. ZAP-70 expression and prognosis in chronic lymphocytic leukaemia. *Lancet.* Jan 10;363(9403):105-11.

Chen L, Widhopf G, Huynh L, Rassenti L, Rai KR, Weiss A, Kipps TJ. 2002. Expression of ZAP-70 is associated with increased B-cell receptor signaling in chronic lymphocytic leukemia. *Blood*. Dec 15;100(13):4609-14.

Related Products

11-4011 Anti-Mouse IgG FITC
11-4317 Streptavidin FITC
12-4317 Streptavidin PE
13-4013 Anti-Mouse IgG Biotin (Polyclonal)
14-4714 Mouse IgG1 K Isotype Control Purified (P3.6.2.1)
17-4317 Streptavidin APC

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