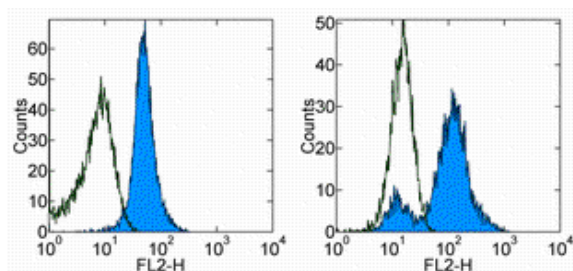


Anti-Human/Mouse ZAP-70 PE

Catalog Number: 12-6695

Also Known As: ZAP70

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



Staining of fixed and permeabilized C57BL/6 thymocytes (left) or Jurkat cells (right) with 0.5 ug of Mouse IgG1 kappa Isotype Control PE (cat. 12-4714) (open histogram) or 0.5 ug of Anti-Human/Mouse ZAP-70 PE (filled histogram). Total cells were used for analysis.

Product Information

Contents: Anti-Human/Mouse ZAP-70 PE


 Catalog Number: 12-6695

Clone: 1E7.2


Concentration: ug size: 0.2 mg/mL; test size: 5 uL (0.5 ug)/test


Host/Isotype: Mouse IgG1, kappa

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

 Temperature Limitation: Store at 2-8°C. Do not freeze. Light sensitive material.

 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 TCRζ-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.

Applications Tested

This 1E7.2 antibody is offered in 2 formats:

- µg size: has been tested by intracellular flow cytometric analysis of mouse thymocytes and human Jurkat cells. This can be used at less than or equal to 1 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10⁵ to 10⁸ cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

- test size: has been pre-titrated and tested by intracellular flow cytometric analysis of mouse thymocytes and human Jurkat cells. This can be used at 5 µL (0.5 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10⁵ to 10⁸ cells/test.

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

00-5523 Foxp3 / Transcription Factor Staining Buffer Set

12-4714 Mouse IgG1 K Isotype Control PE (P3.6.2.1)

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