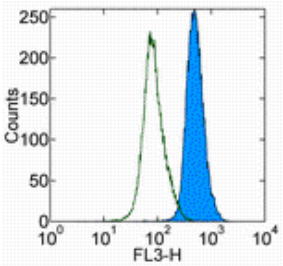
Anti-Human/Mouse ZAP-70 PerCP-Cyanine5.5

Catalog Number: 45-6695
Also Known As:ZAP70
RUO: For Research Use Only. Not for use in diagnostic procedures.



Intracellular staining of C57BL/6 thymocytes with 1.0 ug of Mouse IgG1 K Isotype Control PerCP-Cyanine5.5 (cat. 45-4714) (open histogram) or 1.0 ug of Anti-Human/Mouse ZAP-70 PerCP-Cyanine5.5 (filled histogram) using the Foxp3/Transcription Factor Buffer Set (cat. 00-5523). Cells in the lymphocyte gate were used for analysis.

Product Information

Contents: Anti-Human/Mouse ZAP-70 PerCP-Cyanine5.5
REF **Catalog Number:** 45-6695
Clone: 1E7.2
Concentration: 0.2 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. Do not freeze. Light sensitive material.
LOT **Batch Code:** Refer to Vial
Use By: Refer to Vial
Contains sodium 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 (CCL). 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

This 1E7.2 antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

Applications Tested

This 1E7.2 antibody has been tested by intracellular staining and flow cytometric analysis of mouse thymocytes using the Foxp3/Transcription Factor Buffer Set (cat. 00-5523) and protocol. Please refer to Best Protocols for Staining Protocol (refer to Protocol B: One-step protocol for intracellular (nuclear) proteins). This antibody can be used at less than or equal to 2 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 10^5 to 10^8 cells/test. 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

00-5523 Foxp3 / Transcription Factor Staining Buffer Set
45-4714 Mouse IgG1 K Isotype Control PerCP-Cyanine5.5 (P3.6.2.8.1)

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