Zap-70 Monoclonal Antibody (1E7.2), PE, eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Human, Mouse
Published Species	Mouse
Host/Isotype	Mouse / IgG1, kappa
Recommended Isotype Control	Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), PE, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	1E7.2
Conjugate	PE
Excitation/Emission Max	565/576 nm
Form	Liquid
Concentration	0.2 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_466141

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	1 µg/test	1 Publication

Product Specific Information

Description: The 1E7.2 antibody reacts with human and mouse ZAP-70, the TCR zeta-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.

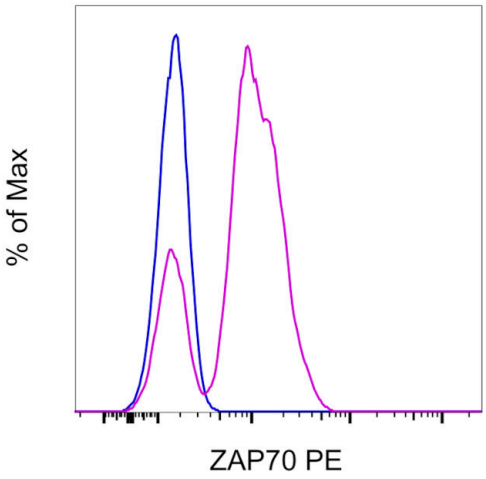
Applications Reported: The 1E7.2 antibody has been reported for use in intracellular flow cytometric analysis.

Applications Tested: This 1E7.2 antibody has been tested by intracellular flow cytometric analysis of mouse thymocytes and human Jurkat cells using the Foxp3/Transcription Factor Buffer Set (cat. 00-5523) and protocol. Please refer to Best Protocols: Protocol B: One step protocol for (nuclear) intracellular proteins. 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 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Excitation: 488-561 nm; Emission: 578 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For Zap-70 Monoclonal Antibody (1E7.2), PE, eBioscience™



Zap-70 Antibody (12-6695-82) in Flow
Normal human peripheral blood cells were stained intracellularly, using the Foxp3 /Transcription Factor Staining Buffer Set (Product # 00-5523-00) and protocol, with 0.5 µg Mouse IgG1 kappa Isotype Control, PE (Product # 12-4714-82) (blue histogram) or 0.5 µg ZAP-70 Monoclonal Antibody, PE (purple histogram). Cells in the lymphocyte gate were used for analysis.

1 Reference

Flow Cytometry (1)

PloS one

Quantitative analysis of protein phosphorylations and interactions by multi-colour IP-FCM as an input for kinetic modelling of signalling networks.

"12-6695 was used in Flow cytometry/Cell sorting to develop a multi-colour immunoprecipitation technique for studying signal transduction events."

Authors: Deswal S,Schulze AK,Höfer T,Schamel WW

Year
2011

Species
Mouse