BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Zap70 Antibody

Catalog Number: M00754-2

About Zap70

Tyrosine kinase that plays an essential role in regulation of the adaptive immune response. Regulates motility, adhesion and cytokine expression of mature T-cells, as well as thymocyte development. Contributes also to the development and activation of primary B-lymphocytes. When antigen presenting cells (APC) activate T-cell receptor (TCR), a serie of phosphorylations lead to the recruitment of ZAP70 to the doubly phosphorylated TCR component CD3Z through ITAM motif at the plasma membrane. This recruitment serves to localization to the stimulated TCR and to relieve its autoinhibited conformation. Release of ZAP70 active conformation is further stabilized by phosphorylation mediated by LCK. Subsequently, ZAP70 phosphorylates at least 2 essential adapter proteins: LAT and LCP2. In turn, a large number of signaling molecules are recruited and ultimately lead to lymphokine production, T-cell proliferation and differentiation. Furthermore, ZAP70 controls cytoskeleton modifications, adhesion and mobility of T-lymphocytes, thus ensuring correct delivery of effectors to the APC. ZAP70 is also required for TCR-CD3Z internalization and degradation through interaction with the E3 ubiquitin-protein ligase CBL and adapter proteins SLA and SLA2. Thus, ZAP70 regulates both T-cell activation switch on and switch off by modulating TCR expression at the T-cell surface. During thymocyte development, ZAP70 promotes survival and cell-cycle progression of developing thymocytes before positive selection (when cells are still CD4/CD8 double negative). Additionally, ZAP70-dependent signaling pathway may also contribute to primary B-cells formation and activation through B-cell receptor (BCR).

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Overview

Product Name	Anti-Zap70 Antibody
Reactive Species	Human, Mouse
Description	Boster Bio Anti-Zap70 Antibody (Catalog # M00754-2). Tested in WB, Flow Cytometry, IF application(s). This antibody reacts with Human, Mouse.
Application	Flow Cytometry, IF, WB
Clonality	Monoclonal 1484CT290.68.62
Formulation	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.
Storage Instructions	Maintain refrigerated at 2-8°C for up to 2 weeks. For long-term storage, store at -20°C in small aliquots to prevent freeze-thaw cycles.
Host	Mouse
Uniprot ID	P43404

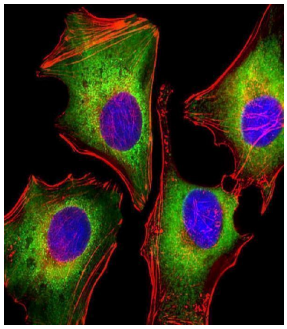
Technical Details

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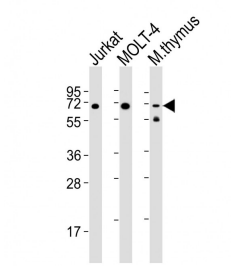
Immunogen	This Zap70 antibody is generated from a mouse immunized with a recombinant protein.
Predicted Reactive Species	Bovine, Mouse
Isotype	IgG2a,k
Purification	This antibody is purified through a protein G column, followed by dialysis against PBS.
Suggested Dilutions	IF: 1:25 WB: 1:2000 FC: 1:25 Tested Species: In-house tested species with positive results. Other applications have not been tested. Optimal dilutions should be determined by end users.

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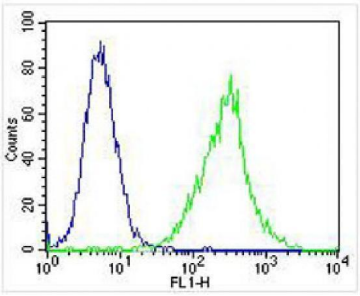
Anti-Zap70 Antibody (M00754-2) Images



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling Zap70 with M00754-2 at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on HeLa cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin at 1/100 dilution (red).The nuclear counter stain is DAPI (blue).



All lanes : Anti-Zap70 Antibody at 1:2000 dilutionLane 1: Jurkat whole cell lysatesLane 2: MOLT-4 whole cell lysatesLane 3: mouse thymus lysatesLysates/proteins at 20 ug per lane. SecondaryGoat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilutionPredicted band size : 70 kDaBlocking/Dilution buffer: 5% NFDM/TBST.



Overlay histogram showing Jurkat cells stained with M00754-2 (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (M00754-2, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed at 1/400 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was mouse IgG2a (1g/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

Anti-Zap70 Antibody

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