

Datasheet for ABIN967849
anti-ZAP70 antibody (AA 468-619)



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Overview

Quantity:	150 µg
Target:	ZAP70
Binding Specificity:	AA 468-619
Reactivity:	Human, Mouse, Rat, Chicken
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This ZAP70 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunoprecipitation (IP)

Product Details

Immunogen:	Human ZAP-70 Kinase aa. 468-619
Clone:	29-ZAP70 Kinase
Isotype:	IgG2a
Cross-Reactivity:	Mouse (Murine), Rat (Rattus), Chicken
Characteristics:	<ol style="list-style-type: none">1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.4. Please refer to us for technical protocols.

Product Details

Purification: The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target: ZAP70

Alternative Name: ZAP-70 ([ZAP70 Products](#))

Background: ZAP-70 is a protein tyrosine kinase (PTK) that associates with the zeta subunit of the T cell antigen receptor (TCR) and undergoes tyrosine phosphorylation following TCR stimulation. ZAP-70 contains two SH2-like domains with the PTK domain being at the C-terminus. It appears that both ZAP-70 and Syk are recruited to the phosphorylated CD3 and zeta subunits after TCR stimulation. The src-family PTKs, lck, and fyn, seem to play a role upstream of ZAP-70 and Syk where they phosphorylate CD3 and zeta. Thus both Src- and ZAP-70/Syk-family PTKs are critical for efficient induction of tyrosine phosphoproteins in heterologous cells. The significance of ZAP-70 in mediating TCR signal transduction has been confirmed by showing that ZAP-70 activity is absent in an autosomal recessive form of severe combined immunodeficiency (SCID). This is due to mutations affecting the ZAP-70 kinase domain which affect the stability of the protein. The levels of lck and fyn appear to be normal in the same cells. Results of the ZAP-70 mutations in these patients include an unusual absence of peripheral CD8+ T cells and an abundance of CD4+ T cells in peripheral lymphoid organs. These results indicate that these two populations of T cells develop through utilization of different intracellular signaling pathways.

Molecular Weight: 70 kDa

Pathways: [TCR Signaling](#), [Ubiquitin Proteasome Pathway](#)

Application Details

Comment: Related Products: ABIN968537, ABIN967389

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 250 µg/mL

Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.

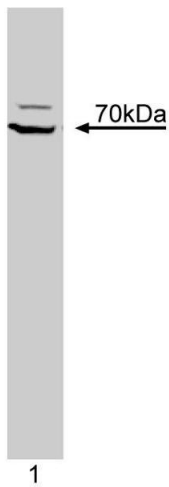
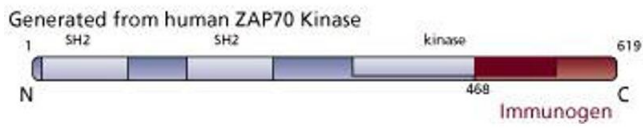
Handling

Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20°C.

Publications

Product cited in:	<p>Michel, Attal-Bonnefoy, Mangino, Mise-Omata, Acuto: "CD28 as a molecular amplifier extending TCR ligation and signaling capabilities." in: Immunity, Vol. 15, Issue 6, pp. 935-45, (2001) (PubMed).</p> <p>Mora, Stanley, Armistead, Chan, Boothby: "Inefficient ZAP-70 phosphorylation and decreased thymic selection in vivo result from inhibition of NF-kappaB/Rel." in: Journal of immunology (Baltimore, Md. : 1950), Vol. 167, Issue 10, pp. 5628-35, (2001) (PubMed).</p> <p>Maccalli, Pisarra, Vegetti, Sensi, Parmiani, Anichini: "Differential loss of T cell signaling molecules in metastatic melanoma patients' T lymphocyte subsets expressing distinct TCR variable regions." in: Journal of immunology (Baltimore, Md. : 1950), Vol. 163, Issue 12, pp. 6912-23, (2000) (PubMed).</p> <p>Arpaia, Shahar, Dadi, Cohen, Roifman: "Defective T cell receptor signaling and CD8+ thymic selection in humans lacking zap-70 kinase." in: Cell, Vol. 76, Issue 5, pp. 947-58, (1994) (PubMed).</p> <p>Chan, Kadlecsek, Elder, Filipovich, Kuo, Iwashima, Parslow, Weiss: "ZAP-70 deficiency in an autosomal recessive form of severe combined immunodeficiency." in: Science (New York, N.Y.), Vol. 264, Issue 5165, pp. 1599-601, (1994) (PubMed).</p>
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Image 1.



Western Blotting

Image 2. Western blot analysis of ZAP-70 Kinase on a Jurkat cell lysate (Human T-cell leukemia, ATCC TIB-152). Lane 1: 1:5000 dilution of the mouse anti- ZAP-70 Kinase antibody. Investigators should note that another unidentified band may be observable migrating above the 70 kDa (ZAP-70 Kinase) target.



Western Blotting

Image 3.