

**ZAP-70 (phospho Tyr493) Polyclonal Antibody**

<b>Catalog No :</b>	YP0277
<b>Reactivity :</b>	Human;Mouse;Rat
<b>Applications :</b>	WB;IHC;IF;ELISA
<b>Target :</b>	ZAP-70
<b>Fields :</b>	>>Ras signaling pathway;>>NF-kappa B signaling pathway;>>Natural killer cell mediated cytotoxicity;>>Th1 and Th2 cell differentiation;>>Th17 cell differentiation;>>T cell receptor signaling pathway;>>Yersinia infection;>>PD-L1 expression and PD-1 checkpoint pathway in cancer;>>Primary immunodeficiency
<b>Gene Name :</b>	ZAP70
<b>Protein Name :</b>	Tyrosine-protein kinase ZAP-70
<b>Human Gene Id :</b>	7535
<b>Human Swiss Prot No :</b>	P43403
<b>Mouse Gene Id :</b>	22637
<b>Mouse Swiss Prot No :</b>	P43404
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human ZAP-70 around the phosphorylation site of Tyr493. AA range:460-509
<b>Specificity :</b>	Phospho-ZAP-70 (Y493) Polyclonal Antibody detects endogenous levels of ZAP-70 protein only when phosphorylated at Y493.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:5000.. IF 1:50-200
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-

chromatography using epitope-specific immunogen.

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**Concentration :** 1 mg/ml

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**Storage Stability :** -15°C to -25°C/1 year(Do not lower than -25°C)

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**Observed Band :** 70kD

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**Cell Pathway :** Natural killer cell mediated cytotoxicity;T\_Cell\_Receptor;Primary immunodeficiency;

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**Background :** This gene encodes an enzyme belonging to the protein tyrosine kinase family, and it plays a role in T-cell development and lymphocyte activation. This enzyme, which is phosphorylated on tyrosine residues upon T-cell antigen receptor (TCR) stimulation, functions in the initial step of TCR-mediated signal transduction in combination with the Src family kinases, Lck and Fyn. This enzyme is also essential for thymocyte development. Mutations in this gene cause selective T-cell defect, a severe combined immunodeficiency disease characterized by a selective absence of CD8-positive T-cells. Two transcript variants that encode different isoforms have been found for this gene. [provided by RefSeq, Jul 2008],

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**Function :** catalytic activity:ATP + a [protein]-L-tyrosine = ADP + a [protein]-L-tyrosine phosphate.,disease:Defects in ZAP70 are the cause of selective T-cell defect (STD) [MIM:176947]. STD is an autosomal recessive form of severe combined immunodeficiency characterized by a selective absence of CD8-type T-cells.,domain:The SH2 domain binds to the phosphorylated tyrosine-based activation motif (TAM) of CD3Z.,function:Plays a role in T-cell development and lymphocyte activation. Essential for TCR-mediated IL-2 production. Isoform 1 induces TCR-mediated signal transduction, isoform 2 does not.,online information:ZAP70 mutation db,PTM:Phosphorylated on tyrosine residues upon T-cell antigen receptor (TCR) stimulation. Tyr-319 phosphorylation is essential for full activity.,similarity:Belongs to the protein kinase superfamily. Tyr protein kinase family. SYK/ZAP-70 subfamily.,similarity:Contains 1 prote

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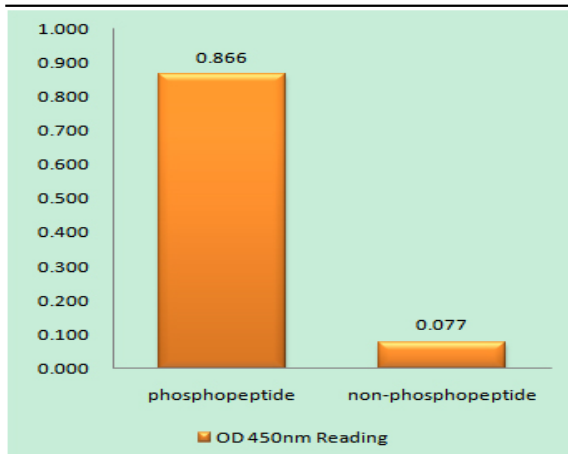
**Subcellular Location :** Cytoplasm . Cell membrane ; Peripheral membrane protein . In quiescent T-lymphocytes, it is cytoplasmic. Upon TCR activation, it is recruited at the plasma membrane by interacting with CD247/CD3Z. Colocalizes together with RHOH in the immunological synapse. RHOH is required for its proper localization to the cell membrane and cytoskeleton fractions in the thymocytes (By similarity). .

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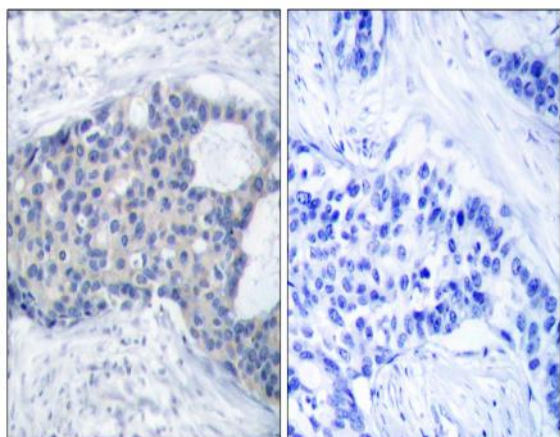
**Expression :** Expressed in T- and natural killer cells. Also present in early thymocytes and pro/pre B-cells.

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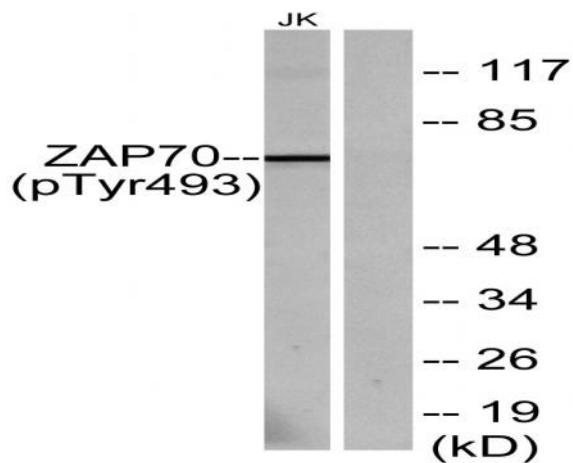
**Products Images**



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using ZAP-70 (Phospho-Tyr493) Antibody



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using ZAP-70 (Phospho-Tyr493) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from Jurkat cells, using ZAP-70 (Phospho-Tyr493) Antibody. The lane on the right is blocked with the phospho peptide.