



# ZAP-70 (phospho Tyr493) Polyclonal Antibody

<b>Catalog No</b>	YP-Ab-14351
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human;Mouse;Rat
<b>Applications</b>	WB;IHC;IF;ELISA
<b>Gene Name</b>	ZAP70
<b>Protein Name</b>	Tyrosine-protein kinase ZAP-70
<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>Purification</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Dilution</b>	WB: 1/500 - 1/2000. IHC: 1/100 - 1/300. ELISA: 1/5000.. IF 1:50-200
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	≥90%
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	ZAP70; SRK; Tyrosine-protein kinase ZAP-70; 70 kDa zeta-chain associated protein; Syk-related tyrosine kinase
<b>Observed Band</b>	70kD
<b>Cell Pathway</b>	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). .
<b>Tissue Specificity</b>	Expressed in T- and natural killer cells. Also present in early thymocytes and pro/pre B-cells.
<b>Function</b>	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

### 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],

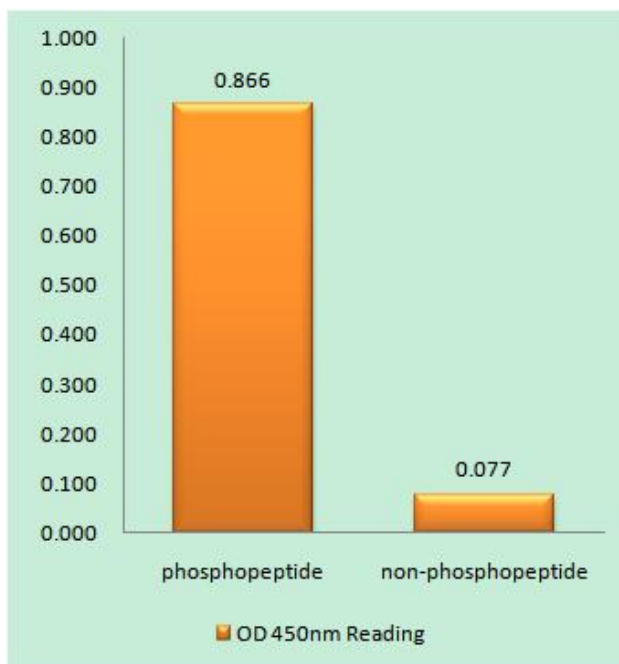
### matters needing attention

Avoid repeated freezing and thawing!

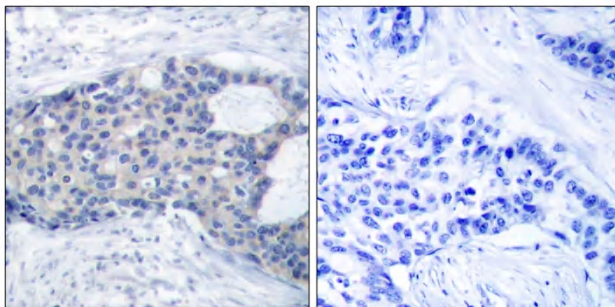
### Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

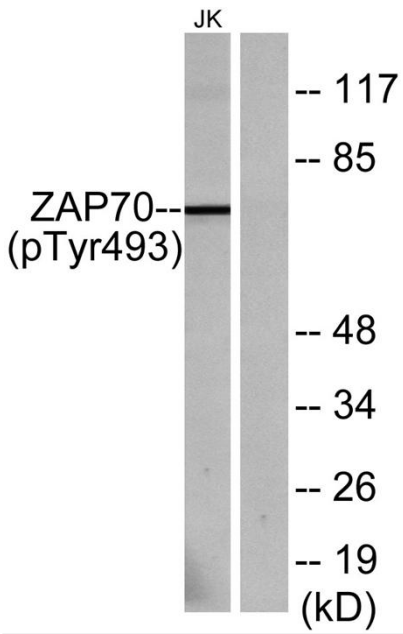
## Products Images



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.