

## Lck (Phospho Ser540) Rabbit pAb

CatalogNo: YP0443 **Orthogonal Validated** 

### Key Features

#### Host Species

- Rabbit

#### Reactivity

- Human, Mouse, Rat

#### Applications

- WB, ELISA

#### MW

- 58kD (Observed)

#### Isotype

- IgG

### Storage

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

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

### Recommended Dilution Ratios

**WB 1:500-1:2000**

**ELISA 1:40000**

**Not yet tested in other applications.**

### Basic Information

**Clonality** Polyclonal

### Immunogen Information

**Immunogen** The antiserum was produced against synthesized peptide derived from human LCK around the phosphorylation site of Ser59. AA range:26-75

**Specificity** Phospho-Lck (S540) Polyclonal Antibody detects endogenous levels of Lck protein only when phosphorylated at S540. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):PASPL

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## | Target Information

**Gene name** LCK

**Protein Name** Tyrosine-protein kinase Lck

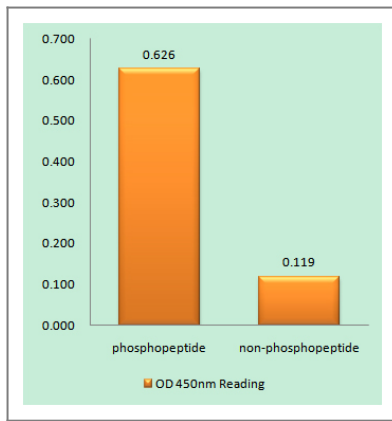
Organism	Gene ID	UniProt ID
Human	<a href="#">3932</a> ;	<a href="#">P06239</a> ;
Mouse	<a href="#">16818</a> ;	<a href="#">P06240</a> ;
Rat	<a href="#">313050</a> ;	<a href="#">Q01621</a> ;

**Cellular Localization** Cell membrane ; Lipid-anchor ; Cytoplasmic side . Cytoplasm , cytosol . Present in lipid rafts in an inactive form. .

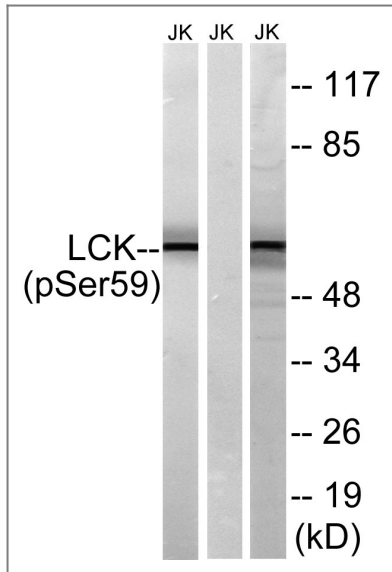
**Tissue specificity** Expressed specifically in lymphoid cells.

**Function** Catalytic activity:ATP + a [protein]-L-tyrosine = ADP + a [protein]-L-tyrosine phosphate. ,Disease:A chromosomal aberration involving LCK is found in leukemias. Translocation t (1;7) (p34;q34) with TCRB. ,Domain:The SH2 domain mediates interaction with SQSTM1. Interaction is regulated by Ser-59 phosphorylation. ,enzyme regulation:Inhibited by tyrosine phosphorylation. ,Function:Tyrosine kinase that plays an essential role for the selection and maturation of developing T-cell in the thymus and in mature T-cell function. Is constitutively associated with the cytoplasmic portions of the CD4 and CD8 surface receptors and plays a key role in T-cell antigen receptor (TCR) -linked signal transduction pathways. Association of the TCR with a peptide antigen-bound MHC complex facilitates the interaction of CD4 and CD8 with MHC class II and class I molecules , respectively , and thereby recruits the associated LCK to the vicinity of the TCR/CD3 complex. LCK then phosphorylates tyrosines residues within the immunoreceptor tyrosines-based activation motifs (ITAMs) in the cytoplasmic tails of the TCRgamma chains and CD3 subunits , initiating the TCR/CD3 signaling pathway. In addition , contributes to signaling by other receptor molecules. Associates directly with the cytoplasmic tail of CD2 , and upon engagement of the CD2 molecule , LCK undergoes hyperphosphorylation and activation. Also plays a role in the IL2 receptor-linked signaling pathway that controls T-cell proliferative response. Binding of IL2 to its receptor results in increased activity of LCK. Is expressed at all stages of thymocyte development and is required for the regulation of maturation events that are governed by both pre-TCR and mature alpha beta TCR. ,mass spectrometry: PubMed:11840567 ,online information:Lck entry ,PTM:Phosphorylated on Tyr-394 , which increases enzymatic activity (By similarity) . Phosphorylated on Tyr-505 , which decreases activity. ,similarity:Belongs to the protein kinase superfamily. Tyr protein kinase family. SRC subfamily. ,similarity:Contains 1 protein kinase domain. ,similarity:Contains 1 SH2 domain. ,similarity:Contains 1 SH3 domain. ,subcellular location:Present in lipid rafts in an unactive form. ,subunit:Binds to the cytoplasmic domain of cell surface receptors , such as CD2 , CD4 , CD5 , CD8 , CD44 , CD45 and CD122. Also binds to effector molecules , such as PI4K , VAV1 , RASA1 , FYB and to other protein kinases including CDC2 , RAF1 , ZAP70 and SYK. Binds to phosphatidylinositol 3'-kinase (PI3K) from T-lymphocytes through its SH3 domain and to the tyrosine phosphorylated form of KHDRBS1/p70 through its SH2 domain. Binds to HIV-1 Nef through its SH3 domain. This interaction inhibits its tyrosine-kinase activity. Interacts with SQSTM1. Interacts with phosphorylated LIME1. Interacts with CBLB and PTPRH. ,tissue specificity:Expressed specifically in lymphoid cells. ,

## Validation Data



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using LCK (Phospho-Ser59) Antibody



Western blot analysis of lysates from Jurkat cells treated with IFN 2500U/ML 30', using LCK (Phospho-Ser59) Antibody. The lane on the right is blocked with the phospho peptide.

## Contact information

Orders: [order.cn@immunoway.com](mailto:order.cn@immunoway.com)  
Support: [support.cn@immunoway.com](mailto:support.cn@immunoway.com)  
Telephone: 400-8787-807(China)  
Website: <http://www.immunoway.com.cn>  
Address: 2200 Ringwood Ave San Jose, CA 95131 USA



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**Lck (Phospho Ser540) Rabbit pAb**

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