Anti-Lck antibody

Description	Rabbit polyclonal to Lck.

Model	STJ93911
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IF, IHC, WB
Immunogen	Synthesized peptide derived from human Lck around the non-phosphorylation site of Y192.
Immunogen Region	130-210 aa
Gene ID	3932
Gene Symbol	LCK
Dilution range	WB 1:500-1:2000IHC 1:100-1:300IF 1:200-1:1000ELISA 1:5000
Specificity	Lck Polyclonal Antibody detects endogenous levels of Lck protein.
Tissue Specificity	Expressed specifically in lymphoid cells.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Tyrosine-protein kinase Lck Leukocyte C-terminal Src kinase LSK Lymphocyte cell-specific protein-tyrosine kinase Protein YT16 Proto-oncogene Lck T cell-specific protein-tyrosine kinase p56-LCK
Molecular Weight	56 kDa

Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:6524OMIM:153390
Alternative Names	Tyrosine-protein kinase Lck Leukocyte C-terminal Src kinase LSK Lymphocyte cell-specific protein-tyrosine kinase Protein YT16 Proto-oncogene Lck T cell-specific protein-tyrosine kinase p56-LCK
Function	Non-receptor tyrosine-protein kinase that plays an essential role in the selection and maturation of developing T-cells in the thymus and in the function of mature T-cells. Plays a key role in T-cell antigen receptor (TCR)-linked signal transduction pathways. Constitutively associated with the cytoplasmic portions of the CD4 and CD8 surface receptors. 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, thereby recruiting the associated LCK protein to the vicinity of the TCR/CD3 complex. LCK then phosphorylates tyrosine residues within the immunoreceptor tyrosine-based activation motifs (ITAM) of the cytoplasmic tails of the TCR-gamma chains and CD3 subunits, initiating the TCR/CD3 signaling pathway. Once stimulated, the TCR recruits the tyrosine kinase ZAP70, that becomes phosphorylated and activated by LCK. Following this, a large number of signaling molecules are recruited, ultimately leading to lymphokine production. LCK also contributes to signaling by other receptor molecules. Associates directly with the cytoplasmic tail of CD2, which leads to hyperphosphorylation and activation of LCK. Also plays a role in the IL2 receptor-linked signaling pathway that controls the 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. Phosphorylates other substrates including RUNX3, PTK2B/PYK2, the microtubule-associated protein MAPT, RHOH or TYROBP. Interacts with ARAP .
Sequence and Domain Family	The SH2 domain mediates interaction with SQSTM1. Interaction is regulated by Ser-59 phosphorylation.
Cellular Localization	Cytoplasm Cell membrane. Present in lipid rafts in an inactive form.
Post-translational Modifications	Autophosphorylated on Tyr-394, increasing enzymatic activity, this site is dephosphorylated by PTN22. Phosphorylated on Tyr-505 by CSK, decreasing activity. Dephosphorylated by PTPRC/CD45. Dephosphorylation at Tyr-394 by PTPN2 negatively regulates T-cell receptor signaling. Myristoylation is required prior to palmitoylation. Palmitoylation regulates subcellular location.