

Mouse Lck Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP14151a**Specification**

Mouse Lck Antibody (N-term) Blocking peptide - Product InformationPrimary Accession [P06240](#)**Mouse Lck Antibody (N-term) Blocking peptide - Additional Information****Gene ID** 16818**Other Names**

Proto-oncogene tyrosine-protein kinase LCK, Leukocyte C-terminal Src kinase, LSK, Lymphocyte cell-specific protein-tyrosine kinase, p56-LCK, Lck, Lsk-t

Target/Specificity

The synthetic peptide sequence used to generate the antibody AP14151a was selected from the N-term region of Mouse Lck. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Mouse Lck Antibody (N-term) Blocking peptide - Protein Information**Name** Lck**Synonyms** Lsk-t**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 (By similarity). Interacts with UNC119; this interaction plays a crucial role in activation of LCK (By similarity).

Cellular Location

Cell membrane; Lipid-anchor; Cytoplasmic side. Cytoplasm, cytosol. Note=Present in lipid rafts in an inactive form. {ECO:0000250|UniProtKB:P06239}

Tissue Location

Present at a low level in most T-cells, and at an elevated level in LSTRA and Thy19 (T-cell lymphoma) cells

Mouse Lck Antibody (N-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

Mouse Lck Antibody (N-term) Blocking peptide - Images

Mouse Lck Antibody (N-term) Blocking peptide - Background

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 (By similarity).

Mouse Lck Antibody (N-term) Blocking peptide - References

Visan, I., et al. J. Immunol. 185(8):4609-4617(2010)Chrobak, P., et al. J. Immunol. 185(7):3948-3959(2010)McCoy, M.E., et al. J. Immunol. 185(6):3285-3294(2010)Veillette, A., et al. J. Immunol. 185(5):2650-2657(2010)Hashimoto-Tane, A., et al. Mol. Cell. Biol. 30(14):3421-3429(2010)