LCK Antibody – Polyclonal

PRODUCT OVERVIEW

Product Name	Lck, Polyclonal Antibody
Full Product Name	Lck Polyclonal Antibody
Product Gene Name	anti-LCK antibody
Clonality	Polyclonal
Molecular Weight	61,190 Da
OMIM	153390
3D Structure	ModBase 3D Structure for P06239
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for anti-LCK antibody	MBS8523528 is an antibody targeting LCK. Also known as Lck Polyclonal Antibody.
Other Notes	Small volumes of anti-LCK antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for LCK. It may not necessarily be applicable to this product.

NCBI GI #	112789548
NCBI GeneID	3932
NCBI Accession #	NP_001036236.1
UniProt Primary Accession #	P06239
UniProt Secondary Accession #	P07100; Q12850; Q13152; Q5TDH8; Q5TDH9; Q7RTZ3; Q96DW4; Q9NYT8; D3DPP8
UniProt Related Accession #	P06239
GenBank Nucleotide #	NM_001042771.2
NCBI Official Full Name	tyrosine-protein kinase Lck isoform a
NCBI Official Synonym Full Names	LCK proto-oncogene, Src family tyrosine kinase
NCBI Official Symbol	LCK
NCBI Official Synonym Symbols	LSK; YT16; IMD22; p56lck; pp58lck
UniProt Protein Name	Tyrosine-protein kinase Lck
UniProt Synonym Protein Names	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
Protein Family	Proto-oncogene tyrosine-protein kinase
UniProt Gene Name	LCK
UniProt Synonym Gene Names	LSK
NCBI Protein Information	tyrosine-protein kinase Lck

NCBI Summary for LCK	This gene is a member of the Src family of protein tyrosine kinases (PTKs). The encoded protein is a key signaling molecule in the selection and maturation of developing T-cells. It contains N-terminal sites for myristylation and palmitylation, a PTK domain, and SH2 and SH3 domains which are involved in mediating protein-protein interactions with phosphotyrosine-containing and proline-rich motifs, respectively. The protein localizes to the plasma membrane and pericentrosomal vesicles, and binds to cell surface receptors, including CD4 and CD8, and other signaling molecules. Multiple alternatively spliced variants encoding different isoforms have been described. [provided by RefSeq, Aug 2016]
UniProt Comments for LCK	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 FYB2 (PubMed:27335501).
Research Articles on LCK	**1.** autophosphorylation of the LCK active-site loop is indispensable for its catalytic activity and LCK can stimulate its own activation by adopting a more open conformation, which can be modulated by point mutations, and CD4 and CD8, T-cell coreceptors, can enhance LCK activity
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