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Anti-LCK Antibody

Catalog # AP59605

Product Information

Application	WB, IF/IC
Primary Accession	P06239
Reactivity	Human, Mouse, Rat, Pig, Chicken, Bovine, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	58001

Additional Information

Gene ID	3932
Other 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
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human LCK. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000), IF/IC (1/100 - 1/500) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

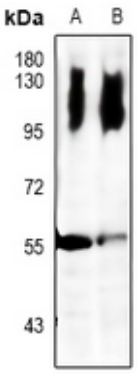
Name	LCK
Function	Non-receptor tyrosine-protein kinase that plays an essential role in the selection and maturation of developing T-cells in the thymus and in the function of mature T-cells (PubMed:2470098). Plays a key role in T-cell antigen receptor (TCR)-linked signal transduction pathways (PubMed:2470098). Constitutively associated with the cytoplasmic portions of the CD4 and CD8 surface receptors (PubMed:2470098). 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 (PubMed:2470098). 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 (PubMed:2470098, PubMed:40592325). 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).

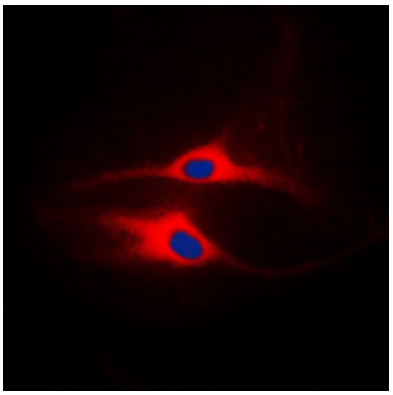
Cellular Location Cell membrane; Lipid-anchor; Cytoplasmic side Cytoplasm, cytosol. Note=Present in lipid rafts in an inactive form.

Tissue Location Expressed specifically in lymphoid cells.

Images



Western blot analysis of LCK expression in K562 (A), A375 (B) whole cell lysates. (Predicted band size: 58 kD; Observed band size: 56 kD)



Immunofluorescent analysis of LCK staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.