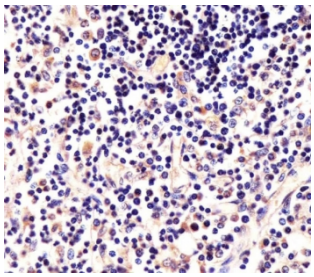
LCK Antibody [clone 1526CT823.75.16] (F54482)

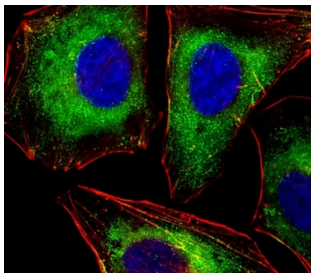
Catalog No.	Formulation	Size
F54482-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F54482-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

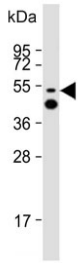
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	IgG1,k
Clone Name	1526CT823.75.16
Purity	Protein G affinity
UniProt	P06239
Localization	Cytoplasmic
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry (FFPE) : 1:25 Flow Cytometry : 1:25 (1x10e6 cells) Immunofluorescence : 1:25
Limitations	This LCK antibody is available for research use only.



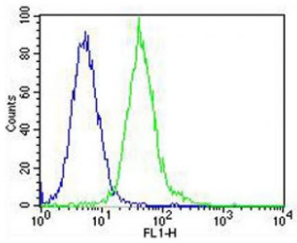
IHC testing of FFPE human thymus tissue with LCK antibody. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



Immunofluorescent staining of fixed and permeabilized human HeLa cells with LCK antibody (green), DAPI nuclear stain (blue) and anti-Actin (red).



Western blot testing of human Jurkat cell lysate with LCK antibody. Predicted molecular weight ~58 kDa.



Flow cytometry testing of fixed and permeabilized human Jurkat cells with LCK antibody; Blue=isotype control, Green= LCK antibody.

Description

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 tyrosines 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.

Application Notes

The stated application concentrations are suggested starting points. Titration of the LCK antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Recombinant human protein was used as the immunogen for the LCK antibody.

Storage

Aliquot the LCK antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.