



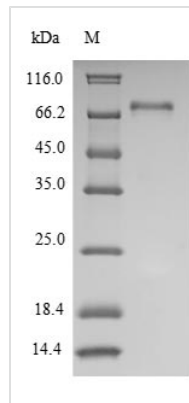
Recombinant Human Tyrosine-protein kinase Lck (LCK)

Product Code	CSB-EP012806HU
Relevance	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 domain 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 domain 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 domain 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.
Abbreviation	Recombinant Human LCK protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P06239
Alias	Leukocyte C-terminal Src kinase Short name:LSK Lymphocyte cell-specific protein-tyrosine kinase Protein YT16 Proto-oncogene Lck T cell-specific protein-tyrosine kinase p56-LCK
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MGCGCSSHPEDDWMENIDVCENCHYPIVPLDGKGTLLIRNGSEVRDPLVTYPE GSNPPASPLQDNLVIALHSYEPSHDGDLGFEKGEQLRILEQSGEWWKAQSLT TGQEGFIPFNFVAKANSLEPEPWFFKNLSRKDAERQLLAPGNTHGSFLIRESE STAGSFSLSVRDFDQNQGEVVKHYKIRNLDNGGGFYISPRITFPGLHELVRHYTN



ASDGLCTRLSRPCQTQKPQKPWWEDWEVPRETLKLVERLGAGQFGEVWM
 GYYNGHTKVAVKSLKQGSMSPD AFLAEANLMKQLQHQR LVRLYAVVTQEPIYI
 ITEYMENDTLLDSQLEEKGLGASPWGNLGQQLLLPTGSLVDFLKT PSGIKLTI
 NKLLDMAAQIAEGMAFIEERNYIHRDLRAANILVSDTL SCKIADFGLARLIEDNEY
 TAREGAKFPIKWTAP EAINYGTFTIKSDVWSFGILLTEIVTHGRIPYPGMTNPEVI
 QNLERGYRMVRPDNCPEELYQLMRLCWKERPEDRPTFDYLR SVLEDFF TATE
 GQYQPQP

Research Area	Immunology
Source	E.coli
Target Names	LCK
Expression Region	1-539aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	65.2kDa
Protein Length	Full Length of Isoform 3

Image


(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.