Active Recombinant Human LCK

Cat. No. LCK-173H **Lot. No.** (See product label)

SPECIFICATION

Species	Human
Source	E.coli
Description	LCK is the designation for the gene encoding lymphocyte protein-tyrosine kinase which has been identified in mouse, where it is coded by chromosome 4, and in man, where molecular analysis by somatic cell hybridization and in situ hybridization indicates that it is coded by the 1p35-p32 segment. Rearrangement of LCK may play a role in the lymphocyte malignancy. The oncogene LCK is the protein-tyrosine kinase that regulates allelic exclusion at the T-cell receptor beta locus. The T-cell antigen receptor plays a crucial role in thymocyte differentiation and T-cell activation. After antigen binding to the TCR, and in concert with engagement of other coreceptors and their associated ligands (such as CD4 (186940) and major histocompatibility complex (MHC) class II, CD28 (186760), B7 (112203), CD8 (186910), and MHC I), signal transduction cascades are activated. Data suggested that deficiency in p56 (LCK) expression can produce a severe combined immunodeficiency (SCID) phenotype in humans. TCR stimulation appears to directly activate STAT5, which may participate in the regulation of gene transcription and T-cell proliferation during immunologic responses.
Purity	> 95% by SDS-PAGE.
Form	Liquid. Supplied in 20 mM Tris-HCl pH 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT and 20% glycerol.

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Application	10 ng of LCK are sufficient to phosphorylated 1 ug of heat-inactivated nuclear or cytoplasmic extract at 30°C for 30 min.
Activity	20-200 ng are sufficient for an in vitro transcription assay and 100 ng are sufficient for a protein-protein interaction assay.
Storage	Quality guaranteed for 12 months. Store at -80°C.?Avoid freeze / thaw cycles.
Usage	For in vitro use only.

GENE INFORMATION

Gene Name	LCK lymphocyte-specific protein tyrosine kinase [Homo sapiens]
Synonyms	lymphocyte-specific protein tyrosine kinase; YT16; p56lck; pp58lck; LCK; protein tyrosine kinase; protein tyrosine kinase; protein tyrosine kinase; protein tyrosine kinase; EC 2.7.10.2; LSK; p56-LCK; Lymphocyte cell-specific protein-tyrosine kinase; T cell-specific protein-tyrosine kinase
Gene ID	3932
mRNA Refseq	NM_001042771
Protein Refseq	NP_001036236
MIM	153390
UniProt ID	P06239
Chromosome Location	1p34.3

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Pathway	Natural killer cell mediated cytotoxicity; Primary immunodeficiency; T cell receptor signaling pathway; HIV Infection; HIV Infection; Signaling in Immune system;
Function	non-membrane spanning protein tyrosine kinase activity; ATP binding; ATPase binding; CD4 receptor binding; CD8 receptor binding; SH2 domain binding; glycoprotein binding; nucleotide binding; phosphoinositide 3-kinase binding; protein C-terminus binding; protein kinase binding; protein serine/threonine phosphatase activity; transferase activity

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