Recombinant LCK protein (His tag)

Catalog Number	546689
Synonyms	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
Species	Human
Expression System	E. coli
Accession	P06239
Molecular Weight	Predictes a molecular mass of 52.80 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 55 kDa band.

Product Information

Sequence Region	64-509
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 64-509 aa (P06239) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human LCK (Tyrosine-protein kinase Lck) Fragment (64-509): A high-purity, functional protein fragment encompassing the SH2 and Protein kinase domains, designed for studying T-cell receptor signaling and kinase activity in immunological research. Tyrosine-protein kinase Lck is a non-receptor tyrosine kinase essential for T-cell development, selection, and activation. It plays a critical role in T-cell antigen receptor (TCR)-linked signal transduction by constitutively associating with CD4/CD8 co-receptors. Upon TCR engagement, LCK phosphorylates immunoreceptor tyrosine-based activation motifs (ITAMs) in CD3 subunits, initiating downstream signaling cascades involving ZAP70 and leading to T-cell proliferation and cytokine production. LCK also participates in IL2 receptor signaling and interacts with various substrates including RUNX3 and PTK2B. The protein is primarily localized to the plasma membrane via lipid anchors, particularly in lipid rafts, and is also found in the cytosol, where it exists in inactive forms prior to TCR stimulation.