磷酸化淋巴细胞特异性蛋白酪氨酸激酶抗体

产品货号： mIR3255

英文名称： Phospho-Lck (Tyr505)

中文名称： 磷酸化淋巴细胞特异性蛋白酪氨酸激酶抗体

别　　名： LCK (phospho Y505); LCK (phospho Tyr505); p-LCK (Tyr505); p56-LCK; Lymphocyte cell-specific protein-tyrosine kinase; LSK; T cell-specific protein-tyrosine kinase; Lck p56; LSK; Lymphocyte Specific Protein Tyrosine Kinase; Membrane associated protein tyrosine kinase; Oncogene lck; P56 LCK; p56(LSTRA) protein tyrosine kinase; p56lck; pp58 lck; pp58lck; Proto oncogene tyrosine protein kinase LCK; Protooncogene tyrosine protein kinase LCK; T cell specific protein tyrosine kinase; T lymphocyte specific protein tyrosine kinase p56lck; YT 16; YT16; LCK_HUMAN.

产品类型： 磷酸化抗体

研究领域： 免疫学　信号转导　转录调节因子　激酶和磷酸酶

抗体来源： Rabbit

克隆类型： Polyclonal

交叉反应　： Human, Mouse, Rat,

产品应用： ELISA=1:500-1000
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

分 子 量： 56kDa

细胞定位： 细胞浆 细胞膜

性　　状： Lyophilized or Liquid

浓　　度： 1mg/ml

免 疫 原： KLH conjugated synthesised phosphopeptide derived from human Lck around the phosphorylation site of Tyr505:GQ(P-Y)QP

亚　　型： IgG

纯化方法： affinity purified by Protein A

储 存 液： 0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.

保存条件： Store at -20 ° C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20° C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ° C.

PubMed： PubMed

产品介绍： This gene is a member of the Src family of protein tyrosine kinases (PTKs). The encoded protein is a key signaling molecule in the selection and maturation of developing T-cells. It contains N-terminal sites for myristylation and palmitylation, a PTK domain, and SH2 and SH3 domains which are involved in mediating protein-protein interactions with phosphotyrosine-containing and proline-rich motifs, respectively. The protein localizes to the plasma membrane and pericentrosomal vesicles, and binds to cell surface receptors, including CD4 and CD8, and other signaling molecules. Multiple alternatively spliced variants, encoding the same protein, have been described. [provided by RefSeq, Jul 2008].

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. 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.

Subunit:

Binds to the cytoplasmic domain of cell surface receptors, such as AXL, CD2, CD4, CD5, CD8, CD44, CD45 and CD122. Also binds to effector molecules, such as PI4K, VAV1, RASA1, FYB and to other protein kinases including CDK1, RAF1, ZAP70 and SYK. Binds to phosphatidylinositol 3'-kinase (PI3K) from T-lymphocytes through its SH3 domain and to the tyrosine phosphorylated form of KHDRBS1/p70 through its SH2 domain. Binds to HIV-1 Nef through its SH3 domain. This interaction inhibits its tyrosine-kinase activity. Interacts with SQSTM1. Interacts with phosphorylated LIME1. Interacts with CBLB and PTPRH. Interacts with RUNX3. Forms a signaling complex with EPHA1, PTK2B AND PI3-KINASE; upon activation by EFNA1 which may regulate T-lymphocyte migration. Associates with ZAP70 and RHOH; these interactions allow LCK-mediated RHOH and CD3 subunit phosphorylation in the presence of functional ZAP70.

Subcellular Location:

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

Tissue Specificity:

Expressed specifically in lymphoid cells.

Post-translational modifications:

Autophosphorylated on Tyr-394, increasing enzymatic activity, this site is dephosphorylated by PTN22. Phosphorylated on Tyr-505 by CSK, decreasing activity. Dephosphorylated by PTPRC/CD45.

Myristoylation is required prior to palmitoylation .

Palmitoylation regulates subcellular location.

DISEASE:

Note=A chromosomal aberration involving LCK is found in leukemias. Translocation t(1;7)(p34;q34) with TCRB.

Similarity:

Belongs to the protein kinase superfamily. Tyr protein kinase family. SRC subfamily.

Contains 1 protein kinase domain.

Contains 1 SH2 domain.

Contains 1 SH3 domain.

SWISS:

P06239

Gene ID:

3932

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Lck 淋巴细胞特异性蛋白酪氨酸激酶，是近年来发现的一种非受体型蛋白酪氨酸激酶，存在于 T 淋巴细胞及其它一些非 T 淋巴细胞内，参与细胞的信号转导过程，在多种生理及病理过程中发挥着重要作用。