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[Marker Primary Antibody]

Rabbit Anti-Phospho-LAt (Tyr171)/Biotin Conjugated antibody

Catalog Number: SL3243R-Bio

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-Phospho-LAT(Tyr171)/Biotin
Immunogen:	KLH conjugated Synthesised phosphopeptide derived from human LAT isoform b around the phosphorylation site of Tyr171
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	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 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	WB=1:500-2000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human(predicted:Mouse,Rat,Pig,Cow,Horse,Rabbit,Sheep)
Background:	background: The protein encoded by this gene is phosphorylated by ZAP-70/Syk protein tyrosine kinases following activation of the T-cell antigen receptor (TCR) signal transduction pathway. This transmembrane protein localizes to lipid rafts and acts as a docking site for SH2 domain-containing proteins. Upon phosphorylation, this protein recruits multiple adaptor proteins and downstream signaling molecules into multimolecular signaling complexes located near the site of TCR engagement. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008] **Function:** Required for TCR (T-cell antigen receptor)- and pre-TCR-mediated signaling, both in mature T-cells and during their development. Involved in FCGR3 (low affinity immunoglobulin gamma Fc region receptor III)-mediated signaling in natural killer cells and FCER1 (high affinity immunoglobulin epsilon receptor)-mediated signaling in mast cells. Couples activation of these

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	receptors and their associated kinases with distal intracellular events such as mobilization of intracellular calcium stores, PKC activation, MAPK activation or cytoskeletal reorganization through the recruitment of PLCG1, GRB2, GRAP2, and other signaling molecules. **Subunit:** When phosphorylated, interacts directly with the PIK3R1 subunit of phosphoinositide 3-kinase and the SH2 domains of GRB2, GRAP, GRAP2, PLCG1 and PLCG2. Interacts indirectly with CBL, SOS, VAV, and LCP2. Interacts with SHB, SKAP2 and CLNK. Interacts with FCGR1A. Interacts with GRB2, PLCG1 and THEMIS upon TCR activation in thymocytes. **Subcellular Location:** Cell membrane; Single-pass type III membrane protein. Note=Present in lipid rafts. **Tissue Specificity:** Expressed in thymus, T-cells, NK cells, mast cells and, at lower levels, in spleen. Present in T-cells but not B-cells (at protein level). **Post-translational modifications:** Phosphorylated on tyrosines by ZAP70 upon TCR activation, or by SYK upon other immunoreceptor activation; which leads to the recruitment of multiple signaling molecules. Is one of the most prominently tyrosine-phosphorylated proteins detected following TCR engagement. May be dephosphorylated by PTPRJ. Phosphorylated by ITK leading to the recruitment of VAV1 to LAT-containing complexes. Palmitoylation of Cys-26 and Cys-29 is required for raft targeting and efficient phosphorylation. **Database links:** **Entrez Gene:** 27040 Human **Entrez Gene:** 16797 Mouse **Entrez Gene:** 81511 Rat Omim: 602354 Human **SwissProt:** O43561 Human **SwissProt:** O54957 Mouse **SwissProt:** O70601 Rat **Unigene:** 632179 Human **Unigene:** 10280 Mouse **Unigene:** 9773 Rat Important **Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.