Revision 1

Store at -20C

#9382

T Cell Signaling Antibody Sampler Kit

Cell Signaling TECHNOLOGY®

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Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Zap-70 (D1C10E) XP® Rabbit mAb	3165	40 µl	70 kDa	Rabbit IgG
Phospho-Zap-70 (Tyr319)/Syk (Tyr352) (65E4) Rabbit mAb	2717	40 µl	70, 72 kDa	Rabbit IgG
SLP-76 Antibody	4958	40 µl	76 kDa	Rabbit
Phospho-LAT (Tyr220) Antibody	3584	40 µl	36, 38 kDa	Rabbit
LAT Antibody	9166	40 µl	36, 38 kDa	Rabbit
Phospho-Lck (Tyr505) Antibody	2751	40 µl	56 kDa	Rabbit
Lck (73A5) Rabbit mAb	2787	40 µl	56 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The T Cell Signaling Antibody Sampler Kit contains primary and secondary antibodies to perform four Western blots with each antibody.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Background

The Syk family protein tyrosine kinase Zap-70 is expressed in T and NK cells and plays a critical role in mediating T cell activation in response to T cell receptor (TCR) engagement (1). Following TCR engagement, Zap-70 is rapidly phosphorylated on several tyrosine residues through autophosphorylation and transphosphorylation by the Src family tyrosine kinase Lck (2-6). Tyrosine phosphorylation correlates with increased Zap-70 kinase activity and downstream signaling events. Expression of Zap-70 is correlated with disease progression and survival in patients with chronic lymphocytic leukemia (7,8).
LAT, a transmembrane adaptor protein expressed in T, NK and mast cells, is an important mediator for T cell receptor (TCR) signaling (9). Upon TCR engagement, activated Zap-70 phosphorylates LAT at multiple conserved tyrosine residues within SH2 binding motifs, exposing these motifs as the docking sites for downstream signaling targets (10,11). The phosphorylation of LAT at Tyr171 and 191 enables the binding of Grb2, Gads/SLP-76, PLCgamma1 and PI3 kinase through their SH2 domain and translocates them to the membrane. This process eventually leads to activation of the corresponding signaling pathways (11-12).

Background References

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