T Cell Signaling Antibody Sampler Kit

Cat# AK0271

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

PRODUCT DESCRIPTION

When T cells encounter antigens via the T cell receptor (TCR), information about the quantity and quality of antigens is relayed to the intracellular signal transduction machinery. This activation process depends mainly on CD3 (Cluster of Differentiation 3), a multiunit protein complex that directly associates with the TCR α and ß chains. CD3 is composed of four polypeptides: ζ, γ, ε and δ. Each of these polypeptides contains at least one immunoreceptor tyrosine-based activation motif (ITAM). The Src family kinases Lck and Fyn are recruited to the TCR complex upon stimulation and activate the downstream tyrosine kinases to initiate signaling. Phosphorylation of Lck at Tyr394 leads to an increase in Lck activity while phosphorylation of Tyr505 in the Lck carboxy-terminal tail down-regulates Lck catalytic activity. Zap-70 and Syk are rapidly phosphorylated on several tyrosine residues through autophosphorylation and transphosphorylation by Src family tyrosine kinases. Activation loop phosphorylation of Zap-70 at Tyr493 and Syk at Tyr526 leads to complete activation of both kinases. Subsequent phosphorylation of other tyrosine residues within the kinase interdomain B region, including Zap-70 at Tyr315 and Zap-70 at Tyr 319, create docking sites for downstream signaling molecules. Zap-70 and Syk phosphorylate the transmembrane adaptor protein LAT at multiple, conserved tyrosine residues within SH2 binding motifs, exposing these motifs as docking sites for downstream signaling targets. The phosphorylation of LAT at Tyr171 and Tyr191 enables the binding of Grb2, Gads/SLP-76, PLC γ 1, and PI3 kinase. The adapter protein SLP-76 is phosphorylated at Tyr113 and Tyr128, allowing for binding of the Grb2-like adapter Gads. Phosphorylation of SLP-76 at Ser376 by hematopoietic progenitor kinase 1 (HPK1) induces interaction with 14-3-3 ε and down-regulates TCR signaling. Phosphoinositide-specific phospholipase PLC γ 1 enzyme activity is also stimulated by Zap-70 and Syk phosphorylation on Tyr783, Tyr711, and Tyr1253, resulting in rob

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340279	Phospho-PLCG1 (Tyr783) Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat, Monkey	Rabbit
A340295	Phospho-c-SRC (Tyr419) Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit

A340362	Phospho-LCP2 (Tyr128) Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340338	Phospho-SYK (Tyr348) Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat, Monkey	Rabbit
A1013s	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120µL	WB, ELISA	Rabbit	Goat

PRODUCT USE LIMITATION

These products are intended for research use only.