

ZAP70, Active recombinant protein**ZAP70, zeta-chain (TCR) associated protein kinase 70kDa****Catalog # PBV11327r****Specification**

ZAP70, Active recombinant protein - Product info

Primary Accession	P43403
Concentration	0.1
Calculated MW	96.0 kDa KDa

ZAP70, Active recombinant protein - Additional Info

Gene ID	7535
Gene Symbol	ZAP70
Other Names	
ZAP70, zeta-chain (TCR) associated protein kinase 70kDa, Syk-related tyrosine kinase	

Source	Baculovirus (Sf9 insect cells)
Assay&Purity	SDS-PAGE; ≥90%
Assay2&Purity2	HPLC;
Recombinant	Yes
Format	
Liquid	

Storage

-80°C; Recombinant proteins in storage buffer (50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM EGTA, 0.1 mM EDTA, 0.1 mM PMSF, 25% glycerol).

ZAP70, Active recombinant protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ZAP70, Active recombinant protein - Images**ZAP70, Active recombinant protein - Background**

ZAP70 is a non-receptor protein tyrosine kinase (part of the Syk/Zap70 family) that is involved in signaling by the T-cell antigen receptor (TCR). Ligation of the TCR/CD3 receptor in Jurkat T-cells induces phosphoprotein complexes which contain ZAP70 (1). TCR zeta chains are initially phosphorylated by p56Lck that lead to the recruitment of ZAP70 via its SH2 domain. ZAP70 in turn

phosphorylates other proteins in the TCR-phosphoprotein complex. ZAP70 tyrosine kinase is tyrosine phosphorylated in Jurkat T cells and in purified peripheral T cells after MHC-I ligation. The phosphorylation of ZAP70 after MHC-I ligation is dependent on TCR/CD3 surface expression. One of the natural substrates for ZAP70 is the zeta-chain dimer of the TCR/CD3 complex (2). Another substrate of ZAP70 is LAT (linker for activation of T cells). Direct tyrosine phosphorylation of LAT with activated protein-tyrosine kinase Zap70 is necessary and sufficient for the association and activation of signalling proteins. Zap-70 efficiently phosphorylates LAT on tyrosine residues at positions 226, 191, 171, 132 and 127. By substituting these tyrosine residues in LAT with phenylalanine and by utilizing phosphorylated peptides derived from these sites, the tyrosine residues in LAT have been shown to be required for the direct interaction and activation of Vav, p85/p110 α and phospholipase C γ 1 (PLC γ 1) (3).

ZAP70, Active recombinant protein - References

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Arpaia E.,et al.Cell 76:947-958(1994).
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