

Immunotag™ Phospho-ZAP-70 (Tyr493) Antibody

Antibody Specification	
Catalog No.	ITA1082
Product Description	Immunotag™ Phospho-ZAP-70 (Tyr493) Antibody
Size	100 µg, 200 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	Phospho-ZAP-70 (Tyr493)
Clonality	Polyclonal
Storage/Stability	-20°C/1 year
Application	WB,IHC,IF/ICC,ELISA
Recommended Dilution	WB 1:500-1:2000 IHC 1:50-1:200, IF/ICC 1:100-1:500
Concentration	1 mg/ml
Reactive Species	Human,Mouse,Rat
Host Species	Rabbit
Immunogen	A synthesized peptide derived from human ZAP-70 around the phosphorylation site of Tyrosine 493
Specificity	Phospho-ZAP-70 (Tyr493) Antibody detects endogenous levels of ZAP-70 only when phosphorylated at Tyrosine 493
Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Form	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.Store at -20 °C.Stable for 12 months from date of receipt
Gene Name	ZAP70
Accession No.	P43403

Antibody Specification

Alternate Names	70 kDa zeta associated protein; 70 kDa zeta-associated protein; EC 2.7.10.2; FLJ17670; FLJ17679; Selective T cell defect; SRK; STD; Syk related tyrosine kinase; Syk-related tyrosine kinase; Truncated ZAP kinase; Tyrosine protein kinase ZAP70; Tyrosine-protein kinase ZAP-70; TZK; ZAP 70; ZAP70; ZAP70_HUMAN; Zeta chain associated protein kinase 70kD; Zeta chain associated protein kinase 70kDa; Zeta chain associated protein kinase 70kDa isoform 1; Zeta chain associated protein kinase 70kDa isoform 2; Zeta chain TCR associated protein kinase 70kD; Zeta chain TCR associated protein kinase 70kDa;
Description	Tyrosine kinase that plays an essential role in regulation of the adaptive immune response. Regulates motility, adhesion and cytokine expression of mature T-cells, as well as thymocyte development. Contributes also to the development and activation of primary B-lymphocytes. When antigen presenting cells (APC) activate T-cell receptor (TCR), a series of phosphorylations lead to the recruitment of ZAP70 to the doubly phosphorylated TCR component CD247/CD3Z through ITAM motif at the plasma membrane. This recruitment serves to localization to the stimulated TCR and to relieve its autoinhibited conformation. Release of ZAP70 active conformation is further stabilized by phosphorylation mediated by LCK. Subsequently, ZAP70 phosphorylates at least 2 essential adapter proteins: LAT and LCP2. In turn, a large number of signaling molecules are recruited and ultimately lead to lymphokine production, T-cell proliferation and differentiation. Furthermore, ZAP70 controls cytoskeleton modifications, adhesion and mobility of T-lymphocytes, thus ensuring correct delivery of effectors to the APC. ZAP70 is also required for TCR-CD247/CD3Z internalization and degradation through interaction with the E3 ubiquitin-protein ligase CBL and adapter proteins SLA and SLA2. Thus, ZAP70 regulates both T-cell activation switch on and switch off by modulating TCR expression at the T-cell surface. During thymocyte development, ZAP70 promotes survival and cell-cycle progression of developing thymocytes before positive selection (when cells are still CD4/CD8 double negative). Additionally, ZAP70-dependent signaling pathway may also contribute to primary B-cells formation and activation through B-cell receptor (BCR).
Cell Pathway/ Category	Primary Polyclonal Antibody
Protein MW	70kDa
Usage	For Research Use Only! Not for diagnostic or therapeutic procedures.