Product Datasheet

ZAP70(Ab-292) Antibody

Catalog No: #21547

Package Size: #21547-1 50ul #21547-2 100ul

Orders: order@signalwayantibody.com
Support: tech@signalwayantibody.com

Description

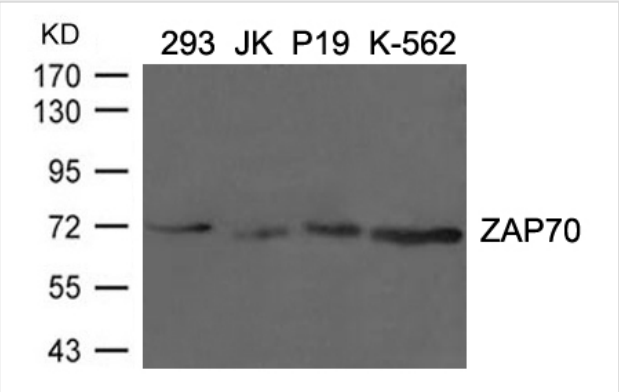
Product Name	ZAP70(Ab-292) Antibody
Host Species	Rabbit
Clonality	Polyclonal
Applications	WB
Species Reactivity	Hu Ms Rt
Specificity	The antibody detects endogenous level of total ZAP70 protein.
Immunogen Type	Peptide-KLH
Immunogen Description	Peptide sequence around aa.288-292 (N-S-D-G-Y) derived from Human ZAP70.
Target Name	ZAP70
Other Names	SRK, STD, TZK, ZAP-70 ,
Accession No.	Swiss-Prot:P43403Gene ID:7535
Uniprot	P43403
GeneID	7535;
Concentration	1.0mg/ml

Application Details

Predicted MW: 70kd

Western blotting: 1: 500~1: 1000

Images



Western blot analysis of extracts from 293, JK, p19 and K-562 cells using ZAP70(Ab-292) Antibody #21547.

Background

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 serie 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).

Note: This product is for in vitro research use only