Best Tools for immunology Research

ZAP-70 mouse mAb

Catalog No :	YM1392
Reactivity :	Human
Applications :	WB;IP
Target :	ZAP-70
Fields :	>>Ras signaling pathway;>>NF-kappa B signaling pathway;>>Natural killer cell mediated cytotoxicity;>>Th1 and Th2 cell differentiation;>>Th17 cell differentiation;>>T cell receptor signaling pathway;>>Yersinia infection;>>PD-L1 expression and PD-1 checkpoint pathway in cancer;>>Primary immunodeficiency
Gene Name :	zap70
Human Gene Id :	7535
Human Swiss Prot No :	P43403
Mouse Swiss Prot No :	P43404
Immunogen :	Purified recombinant human ZAP-70 protein fragments expressed in E.coli.
Specificity :	This antibody detects endogenous levels of ZAP-70 and does not cross-react with related proteins.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Monoclonal, Mouse
Dilution :	wb dilution 1:1000
Purification :	The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)

Observed Band : 70kD

Cell Pathway : Natural killer cell mediated cytotoxicity;T_Cell_Receptor;Primary immunodeficiency;

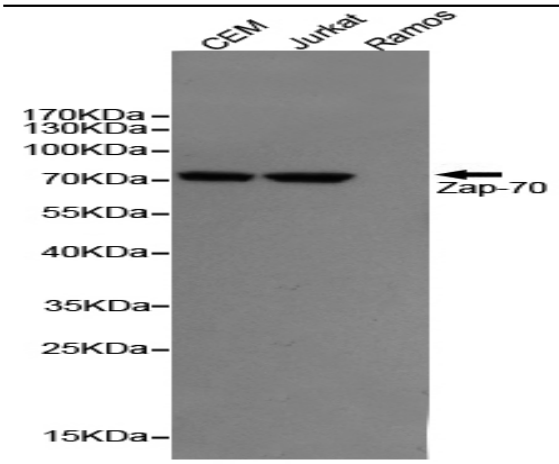
Background : This gene encodes an enzyme belonging to the protein tyrosine kinase family, and it plays a role in T-cell development and lymphocyte activation. This enzyme, which is phosphorylated on tyrosine residues upon T-cell antigen receptor (TCR) stimulation, functions in the initial step of TCR-mediated signal transduction in combination with the Src family kinases, Lck and Fyn. This enzyme is also essential for thymocyte development. Mutations in this gene cause selective T-cell defect, a severe combined immunodeficiency disease characterized by a selective absence of CD8-positive T-cells. Two transcript variants that encode different isoforms have been found for this gene. [provided by RefSeq, Jul 2008],

Function : catalytic activity:ATP + a [protein]-L-tyrosine = ADP + a [protein]-L-tyrosine phosphate.,disease:Defects in ZAP70 are the cause of selective T-cell defect (STD) [MIM:176947]. STD is an autosomal recessive form of severe combined immunodeficiency characterized by a selective absence of CD8-type T-cells.,domain:The SH2 domain binds to the phosphorylated tyrosine-based activation motif (TAM) of CD3Z.,function:Plays a role in T-cell development and lymphocyte activation. Essential for TCR-mediated IL-2 production. Isoform 1 induces TCR-mediated signal transduction, isoform 2 does not.,online information:ZAP70 mutation db,PTM:Phosphorylated on tyrosine residues upon T-cell antigen receptor (TCR) stimulation. Tyr-319 phosphorylation is essential for full activity.,similarity:Belongs to the protein kinase superfamily. Tyr protein kinase family. SYK/ZAP-70 subfamily.,similarity:Contains 1 prote

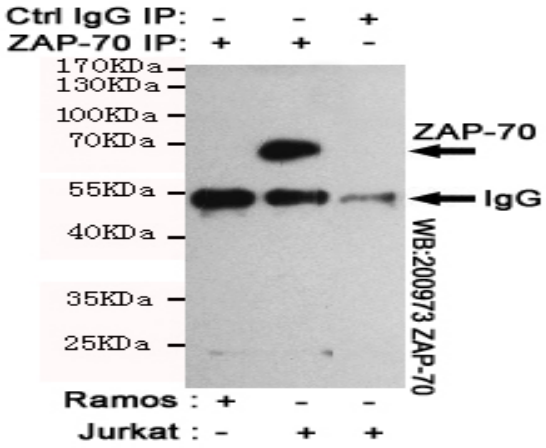
Subcellular Location : Cytoplasm . Cell membrane ; Peripheral membrane protein . In quiescent T-lymphocytes, it is cytoplasmic. Upon TCR activation, it is recruited at the plasma membrane by interacting with CD247/CD3Z. Colocalizes together with RHOH in the immunological synapse. RHOH is required for its proper localization to the cell membrane and cytoskeleton fractions in the thymocytes (By similarity). .

Expression : Expressed in T- and natural killer cells. Also present in early thymocytes and pro/pre B-cells.

Products Images



Western blot detection of ZAP-70 in CEM and Jurkat cell lysates,negative in the Ramos cell lysates using ZAP-70 mouse mAb (1:1000 diluted).Predicted band size:70KDa.Observed band size:70KDa.



Immunoprecipitation analysis of Jurkat cell lysates (ZAP-70 positive expression cell line)and Ramos cell lysates(ZAP-70 negative expression cell line) using ZAP-70 mouse mAb.