



ZAP-70 mouse mAb

Catalog No	YP-Ab-14234
Isotype	IgG
Reactivity	Human
Applications	WB;IP
Gene Name	zap70
Protein Name	
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
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen.
Dilution	wb dilution 1:1000
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	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;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.
Observed Band	70kD
Cell Pathway	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). .
Tissue Specificity	Expressed in T- and natural killer cells. Also present in early thymocytes and pro/pre B-cells.



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

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],

matters needing attention

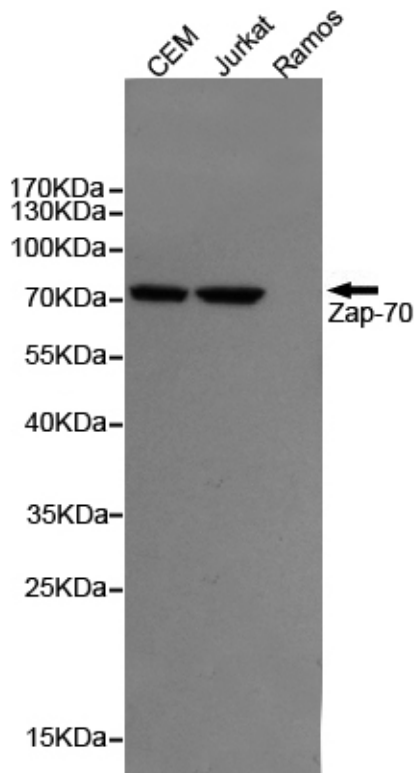
Avoid repeated freezing and thawing!

Usage suggestions

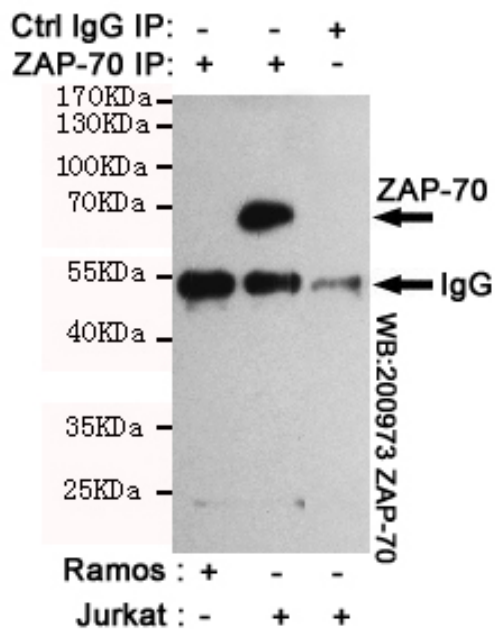
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



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.