

BACKGROUND

ZAP-70 is a protein tyrosine kinase (PTK) required for T-cell development and T-cell antigen receptor (TCR) function. ZAP-70 is associated with the phosphorylated antigen receptor and undergoes tyrosine phosphorylation following receptor activation. It was demonstrated that tyrosine phosphorylation of ZAP-70 resulted in an increase in its catalytic activity and that this activation is mediated by the phosphorylation of tyrosine residue 493 by the Src family of PTKs.¹ Its key role in thymocytes development and mature T lymphocytes activation has been illustrated by the characterization of several human immunodeficiencies presenting with mutations in the Zap-70 gene resulting in the absence of ZAP-70 expression. More recently, it has been shown that deregulation of ZAP-70 activity can induce autoimmune diseases. Finally, ZAP-70 expression has been shown in some B chronic lymphocytic leukemia and correlated with bad prognosis of the disease. The diversity of pathologies associated with deregulation of ZAP-70 demonstrates its key role in immune responses. Research aiming at deciphering the different signaling pathways regulated by ZAP-70 will not only shed some lights on these pathologies, but will also help finding new pharmacological tools targeting ZAP-70, to induce immunosuppression or tolerance.²

References:

1. Chan, AC et al. : EMBO J. 14:2499, 1995.
2. Hivroz, C., Med Sci (Paris). 21:150, 2005.

TECHNICAL INFORMATION

Source: Anti-ZAP70 is a mouse monoclonal antibody raised against recombinant ZAP70 protein.

Specificity and Sensitivity: Anti-ZAP70 reacts specifically with human ZAP70 protein in Western Blot applications.

Storage Buffer: PBS and 30% Glycerol.

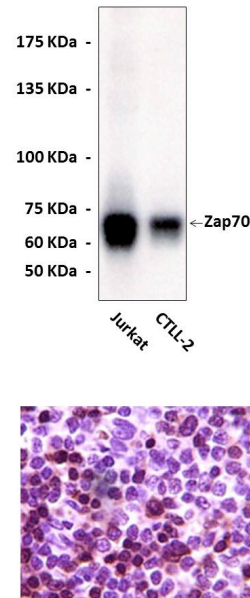
Storage: Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC	n/d
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA



Top: Specific detection of Zap-70 proteins from Jurkat and CTLL-2 cell lysates in Western blot analysis using Zap-70 Monoclonal Antibody (3D18). **Bottom:** This antibody also stains paraffin-embedded human lymphoma tissue in immunohistochemical analysis.

