

ZAP-70 (LR): sc-574



The Power to Question

BACKGROUND

The activation of T lymphocytes by antigens is mediated by the T cell receptor (TCR) which is a multisubunit complex assembled from at least six different genes. The TCR subunits include the T α and β chains, the CD3 γ , δ and ϵ chains and a ζ -containing homodimer or heterodimer. The disulfide-linked T α - β heterodimer is responsible for antigen recognition, but the short 5 amino acid cytoplasmic domains of T α and β are unlikely to be sufficient to couple to intracellular signaling pathways. In contrast, the structured features of the CD3 and ζ subunits suggest a role in signal transduction. Of these, the ζ chain, which is expressed as either a homodimer or hetero-dimer, has a short extracellular domain of only 9 amino acids, but a larger 113 amino acid cytoplasmic domain. A tyrosine phosphoprotein, ZAP-70, has been identified that associates with ζ and undergoes tyrosine phosphorylation following TCR stimulation.

CHROMOSOMAL LOCATION

Genetic locus: ZAP70 (human) mapping to 2q11.2; Zap70 (mouse) mapping to 1 B.

SOURCE

ZAP-70 (LR) is a rabbit polyclonal antibody raised against a peptide sequence mapping within a linker region of ZAP-70 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as agarose (sc-574 AC) conjugate for immunoprecipitation, 500 μ g/0.25 ml agarose in 1 ml.

APPLICATIONS

ZAP-70 (LR) is recommended for detection of ZAP-70 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ZAP-70 siRNA (h): sc-29526, ZAP-70 siRNA (m): sc-36867, ZAP-70 shRNA Plasmid (h): sc-29526-SH, ZAP-70 shRNA Plasmid (m): sc-36867-SH, ZAP-70 shRNA (h) Lentiviral Particles: sc-29526-V and ZAP-70 shRNA (m) Lentiviral Particles: sc-36867-V.

Molecular Weight of ZAP-70: 70 kDa.

Positive Controls: ZAP-70 (m): 293T Lysate: sc-124695, ZAP-70 (h2): 293T Lysate: sc-116483 or Jurkat whole cell lysate: sc-2204.

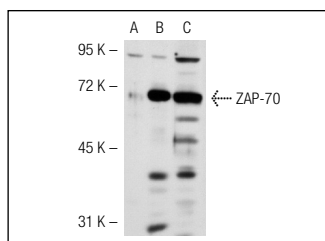
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

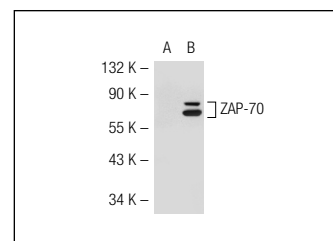
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



ZAP-70 (LR): sc-574. Western blot analysis of ZAP-70 expression in non-transfected 293T: sc-117752 (A), mouse ZAP-70 transfected 293T: sc-124695 (B) and Jurkat (C) whole cell lysates.



ZAP-70 (LR): sc-574. Western blot analysis of ZAP-70 expression in non-transfected: sc-117752 (A) and human ZAP-70 transfected: sc-116483 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Marengere, L.E., et al. 1996. Regulation of T cell receptor signaling by tyrosine phosphatase SYP association with CTLA-4. *Science* 270: 1170-1173.
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- Martin, P., et al. 2006. The signaling adapter p62 is an important mediator of T helper 2 cell function and allergic airway inflammation. *EMBO J.* 25: 3524-3533.
- Caparros, E., et al. 2006. DC-SIGN ligation on dendritic cells results in ERK and PI3K activation and modulates cytokine production. *Blood* 107: 3950-3958.
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- Wu, W., et al. 2009. Antibody array analysis with label-based detection and resolution of protein size. *Mol. Cell. Proteomics* 8: 245-257.
- Shuh, M., et al. 2011. Association of SRC-related kinase Lyn with the interleukin-2 receptor and its role in maintaining constitutive phosphorylation of JAK/STAT in human T-cell leukemia virus type 1-transformed T cells. *J. Virol.* 85: 4623-4627.

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