

ZAP-70 (ZAP-03): sc-66176

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 five 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 heterodimer, 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.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ZAP70 (human) mapping to 2q12.

RESEARCH USE

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

SOURCE

ZAP-70 (ZAP-03) is a mouse monoclonal antibody raised against a fusion protein corresponding to the C-terminal 160 amino acids of ZAP-70 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ZAP-70 (ZAP-03) is recommended for detection of ZAP-70 of 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)] and flow cytometry (1 μ g per 1×10^6 cells).

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

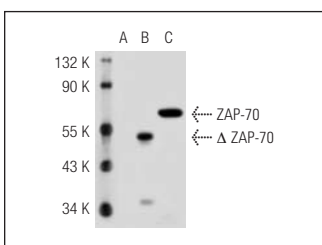
Molecular Weight of ZAP-70: 70 kDa.

Positive Controls: human lymphoma, Jurkat whole cell lysate: sc-2204 or MOLT-4 cell lysate: sc-2233.

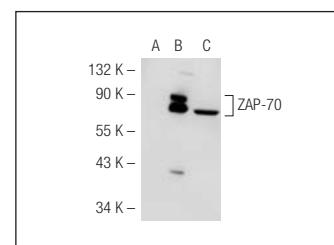
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



ZAP-70 (ZAP-03): sc-66176. Western blot analysis of ZAP-70 expression in non-transfected 293T: sc-117752 (A), truncated human ZAP-70 transfected 293T: sc-114635 (B) and Jurkat (C) whole cell lysates.



ZAP-70 (ZAP-03): sc-66176. Western blot analysis of ZAP-70 expression in non-transfected 293T: sc-117752 (A), human ZAP-70 transfected 293T: sc-116483 (B) and CCRF-CEM (C) whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.