**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 Ti α and β chains, the CD3 γ, δ and ε chains and a ζ-containing homodimer or heterodimer. The disulfide-linked Ti αβ heterodimer is responsible for antigen recognition, but the short five amino acid cytoplasmic domains of Ti 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.

**CHROMOSOMAL LOCATION**

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

**SOURCE**

ZAP-70 (1E7.2) is a mouse monoclonal antibody raised against amino acids 282-307 of ZAP-70 of human origin.

**PRODUCT**

Each vial contains 200 µg IgGκ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ZAP-70 (1E7.2) is available conjugated to agarose (sc-32760 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32760 HRP), 200 µg/ml, for WB, IHC(PI) and ELISA; and to either phycoerythrin (sc-32760 PE), fluorescein (sc-32760 FITC), Alexa Fluor® 488 (sc-32760 AF488) or Alexa Fluor® 647 (sc-32760 AF647), 200 µg/ml, for IF, IHC(PI) and FCM.

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**APPLICATIONS**

ZAP-70 (1E7.2) 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 µg per 100-500 µg of total protein (1 ml of cell lysate), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁸ cells).


Molecular Weight of ZAP-70: 70 kDa.

Positive Controls: BYDP whole cell lysate: sc-364388, Jurkat whole cell lysate: sc-2204 or CCRF-CEM cell lysate: sc-2225.

**RESEARCH USE**

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

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**PROTOCOLS**

See our website at www.scbt.com for detailed protocols and support products.