

CD3- δ (C-20): sc-1128

BACKGROUND

The T cell antigen receptor (TCR) recognizes foreign antigens and translates such recognition events into intracellular signals that elicit a change in the cell from a dormant to an activated state. Much of this signaling process can be attributed to a multisubunit complex of proteins that associates directly with the TCR. This complex has been designated CD3 (cluster of differentiation 3). It is composed of five invariant polypeptide chains that associate to form three dimers: a heterodimer of γ and ϵ chains ($\gamma\epsilon$), a heterodimer of δ and ϵ chains ($\delta\epsilon$) and a homodimer of two ζ chains ($\zeta\zeta$) or a heterodimer of ζ and η chains ($\zeta\eta$). The ζ and η chains are encoded by the same gene but differ in their carboxyl-terminal ends due to an alternative splicing event. The γ , ϵ and δ chains each contain a single copy of a conserved immunoreceptor tyrosine-based activation motif (ITAM). In contrast, the ζ chain contains three consecutive copies of the same motif. Phosphorylated ITAMs act as docking sites for protein kinases such as ZAP-70 and Syk and are also capable of regulating their kinase activity. The crystal structure of ZAP-70's SH2 domains bound to the ζ chain ITAMs has been solved.

REFERENCES

1. Exley, M., et al. 1991. Structure, assembly and intracellular transport of the T cell receptor for antigen. *Sem. Immunol.* 3: 283-297.
2. Weiss, A., et al. 1991. Signal transduction by the T cell antigen receptor. *Sem. Immunol.* 3: 313-324.
3. Chan, A.C., et al. 1994. The role of protein tyrosine kinases and protein tyrosine phosphatases in cell antigen receptor signal transduction. *Sem. Immunol.* 12: 555-592.
4. Aoe, T., et al. 1994. Different cytoplasmic structure of the CD3- ζ family dimer modulates the activation signal and function of T cells. *Intl. Immunol.* 6: 1671-1679.

CHROMOSOMAL LOCATION

Genetic locus: CD3D (human) mapping to 11q23.3.

SOURCE

CD3- δ (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD3- δ 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.

Blocking peptide available for competition studies, sc-1128 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

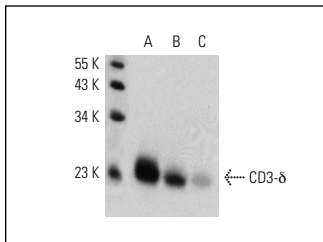
CD3- δ (C-20) is recommended for detection of CD3- δ of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 CD3- δ siRNA (h): sc-42749, CD3- δ shRNA Plasmid (h): sc-42749-SH and CD3- δ shRNA (h) Lentiviral Particles: sc-42749-V.

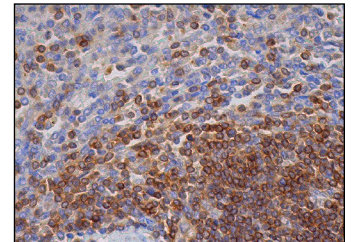
Molecular Weight of CD3- δ : 20 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, Jurkat whole cell lysate: sc-2204 or HuT 78 whole cell lysate: sc-2208.

DATA



CD3- δ (C-20): sc-1128. Western blot analysis of CD3- δ expression in CCRF-CEM (A), Jurkat (B) and HuT 78 (C) whole cell lysates.



CD3- δ (C-20): sc-1128. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane and cytoplasmic staining of subset of cells in white pulp and staining of cells in red pulp.

SELECT PRODUCT CITATIONS

1. Dadi, H.K., et al. 2003. Effect of CD3- δ deficiency on maturation of α/β and γ/δ T-cell lineages in severe combined immunodeficiency. *N. Eng. J. Med.* 349: 1821-1828.

PROTOCOLS

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


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Try **CD3- δ (F-1): sc-137137**, our highly recommended monoclonal alternative to CD3- δ (C-20).