

CD45RA (3H1433): sc-70704

BACKGROUND

CD45 has been identified as a transmembrane glycoprotein, broadly expressed among hematopoietic cells. Eight isoforms of CD45 are distributed throughout the immune system according to cell type. The variation in these isoforms is localized to the extracellular domain of CD45, while the intracellular domain is conserved. CD45 functions as a phosphotyrosine phosphatase, a vital component for efficient tyrosine phosphorylation induction by the TCR/CD3 complex. The tyrosine phosphatase activity of CD45 is contained within the conserved intracellular domain. Src and Syk family protein tyrosine kinases are utilized by the TCR/CD3 complex to initiate signaling cascades. Several members of these two families, including Lck, Fyn and ZAP-70, have been implicated as physiological substrates of CD45.

REFERENCES

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- Poppema, S., et al. 1987. Monoclonal antibodies (MT1, MT2, MB1, MB2, MB3) reactive with leukocyte subsets in paraffin-embedded tissue sections. *Am. J. Pathol.* 127: 418.
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- Bazil, V., et al. 1989. Monoclonal antibodies against human leukocyte antigens. III. Antibodies against CD45R, CD6, CD44 and two newly described broadly expressed glycoproteins MEM-53 and MEM-102. *Folia Biol.* 35: 289-297.
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CHROMOSOMAL LOCATION

Genetic locus: PTPRC (human) mapping to 1q31.3.

SOURCE

CD45RA (3H1433) is a mouse monoclonal antibody raised against thymocytes and T lymphocytes of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 mL PBS with < 0.1% sodium azide and 0.1% gelatin.

CD45RA (3H1433) is available conjugated either phycoerythrin (sc-70704 PE, 100 tests in 2 ml) or fluorescein (sc-70704 FITC, 100 tests in 2 ml), for IF, IHC(P) and FCM.

APPLICATIONS

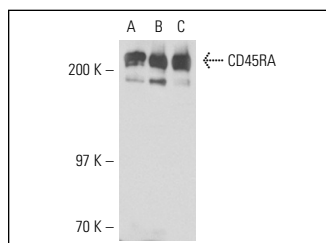
CD45RA (3H1433) is recommended for detection of CD45RA of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for CD45 siRNA (h): sc-29251.

Molecular Weight of CD45RA: 180-220 kDa.

Positive Controls: AML-193 whole cell lysate, Ramos cell lysate: sc-2216 or NAMALWA cell lysate: sc-2234.

DATA



CD45RA (3H1433): sc-70704. Western blot analysis of CD45RA expression in AML-193 (A), Ramos (B) and NAMALWA (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.

RESEARCH USE

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

PROTOCOLS

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