

TCR V β (R78): sc-53768

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. TCR is a heterodimer composed of either α and β or γ and δ chains. The vast majority of circulating T cells (95%) express the α/β heterodimer while roughly 2-5% express the γ/δ heterodimer. Recognizing such a variety of antigens requires diverse specificities in the TCR repertoire. This is obtained by the somatic recombination of variable (V), diversity (D) and joining (J) gene segments in the assembly of each TCR chain. The TCR β and γ chain genes lie in distinct loci, while the genes encoding the TCR α and δ chains comprise a single locus. During T cell development, the β chain is synthesized by first joining a D segment with a J segment, then adding a V segment with the D-J gene, and later a C segment. Genetic mutations involving the T cell receptor β locus have been associated with T cell lymphomas.

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CHROMOSOMAL LOCATION

Genetic locus: Tcrb (rat) mapping to 4q22.

RESEARCH USE

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

SOURCE

TCR V β (R78) is a mouse monoclonal antibody raised against V β 8.2 rat/mouse T cell hybrid 56.4 expressing TCR of human origin.

PRODUCT

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

APPLICATIONS

TCR V β (R78) is recommended for detection of TCR V β of mouse and rat origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

Molecular Weight of TCR V β : 34 kDa.

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 for detailed protocols and support products.