

TCR β (S-18): sc-31278

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. CD3 chains and the CD4 or CD8 coreceptors are also required for efficient signal transduction through the TCR. The TCR is expressed on T helper and T cytotoxic cells that can be distinguished by their expression of CD4 and CD8. T helper cells express CD4 proteins and T cytotoxic cells display CD8. CD4 is also expressed on cortical cells, mature medullary thymocytes, microglial cells and dendritic cells. CD4, also designated T4 and Leu 3, is a membrane glycoprotein that contains four extracellular immunoglobulin-like domains. The TCR, in association with CD4, can bind MHC class II molecules presented by the antigen-presenting cells. The CD4 protein functions by increasing the avidity of the interaction between the TCR and an antigen-MHC class II complex.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TRBC1 (human) mapping to 7p22.3; Trbc1 (mouse) mapping to 6 B1.

SOURCE

TCR β (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TCR β 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-31278 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TCR β (S-18) is recommended for detection of TCR β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TCR β (S-18) is also recommended for detection of TCR β in additional species, including canine.

Suitable for use as control antibody for TCR β siRNA (h): sc-36629, TCR β siRNA (m): sc-36630, TCR β shRNA Plasmid (h): sc-36629-SH, TCR β shRNA Plasmid (m): sc-36630-SH, TCR β shRNA (h) Lentiviral Particles: sc-36629-V and TCR β shRNA (m) Lentiviral Particles: sc-36630-V.

Molecular Weight of TCR β : 39 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233 or CCRF-CEM cell lysate: sc-2225.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.


 MONOS
 Satisfation
 Guaranteed

Try **TCR β (G-11): sc-5277**, our highly recommended monoclonal alternative to TCR β (S-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **TCR β (G-11): sc-5277**.