

TCR γ (FL-189): sc-25609

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 co-receptors 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 class II MHC molecules presented by the antigen-presenting cells. The CD4 protein functions by increasing the avidity of the interaction between the TCR and an antigen-class II MHC complex.

REFERENCES

- Maddon, P.J., et al. 1987. Structure and expression of human and mouse T4 genes. Proc. Natl. Acad. Sci. USA 84: 9155-9159.
- Arthos, J., et al. 1989. Identification of the residues in human CD4 critical for the binding of HIV. Cell 57: 469-481.
- Healey, D., et al. 1990. Novel anti-CD4 monoclonal antibodies separate human immunodeficiency virus infection and fusion of CD4⁺ cells from virus binding. J. Exp. Med. 172: 1233-1242.
- Weiss, A., et al. 1991. Signal transduction by the T cell antigen receptor. Semin. Immunol. 3: 313-324.
- Allison, J.P., et al. 1991. The immunobiology of T cells with invariant γ/δ antigen receptors. Annu. Rev. Immunol. 9: 679-705.
- Julius, M., et al. 1993. Distinct roles for CD4 and CD8 as co-receptors in antigen receptor signalling. Immunol. Today 14: 177-183.

CHROMOSOMAL LOCATION

Genetic locus: TRG (human) mapping to 7p22.3; Tcrg-V1/Trgv2/Tcrg-V3 (mouse) mapping to 13 A2.

SOURCE

TCR γ (FL-189) is a rabbit polyclonal antibody raised against amino acids 1-189 representing full length TCR γ 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.

STORAGE

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

APPLICATIONS

TCR γ (FL-189) is recommended for detection of TCR γ of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TCR γ siRNA (h): sc-36627, TCR γ shRNA Plasmid (h): sc-36627-SH and TCR γ shRNA (h) Lentiviral Particles: sc-36627-V.

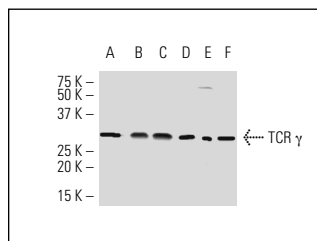
Molecular Weight of TCR γ : 30 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, CTLL-2 cell lysate: sc-2242 or DU 145 nuclear extract: sc-24960.

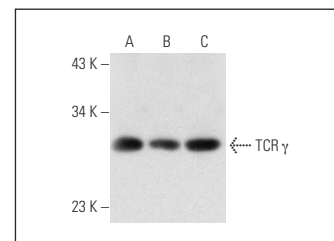
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TCR γ (FL-189): sc-25609. Western blot analysis of TCR γ expression in DU 145 (A), PC-3 (B), Jurkat (C) and CTLL-2 (D) whole cell lysates and DU 145 (E) and PC-3 (F) nuclear extracts.



TCR γ (FL-189): sc-25609. Western blot analysis of TCR γ expression in MCF7 (A) and SK-BR-3 (B) nuclear extracts and BYDP whole cell lysate (C).

RESEARCH USE

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

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Try **TCR γ (UC3-10A6): sc-19609**, our highly recommended monoclonal alternative to TCR γ (FL-189).