

TCR (KJ1-26): sc-65737

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

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- Weiss, A., et al. 1991. Signal transduction by the T cell antigen receptor. *Semin. Immunol.* 3: 313-324.
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SOURCE

TCR (KJ1-26) is a mouse monoclonal antibody raised against T cell hybridoma DO11.10 of mouse origin.

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.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for blocking T cell receptors on the DO-11.10 hybridoma, sc-65737 L, 200 μ g/0.1 ml.

TCR (KJ1-26) is available conjugated to agarose (sc-65737 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-65737 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-65737 PE), fluorescein (sc-65737 FITC), Alexa Fluor[®] 488 (sc-65737 AF488), Alexa Fluor[®] 546 (sc-65737 AF546), Alexa Fluor[®] 594 (sc-65737 AF594) or Alexa Fluor[®] 647 (sc-65737 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-65737 AF680) or Alexa Fluor[®] 790 (sc-65737 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

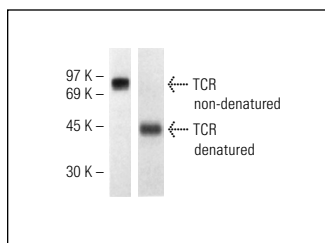
TCR (KJ1-26) is recommended for detection of DO-11.10 T cell receptors of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and flow cytometry (1 μ g per 1 x 10⁶ cells).

Molecular Weight of TCR: 39 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Western blot analysis of TCR expression in DO-11.10 immunoprecipitated with TCR (KJ1-26): sc-65737. Note presence of non-denatured and denatured forms. Kindly provided by National Jewish Health.

PROTOCOLS

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