

CD4 (H-370): sc-7219

BACKGROUND

The T cell receptor (TCR) is a heterodimer composed of either α and β or γ and δ chains. 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. An additional role of CD4 is to function as a receptor for HIV.

CHROMOSOMAL LOCATION

Genetic locus: CD4 (human) mapping to 12p13.31; Cd4 (mouse) mapping to 6 F2.

SOURCE

CD4 (H-370) is a rabbit polyclonal antibody raised against amino acids 26-396 of CD4 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.

Available as fluorescein conjugate for immunofluorescence, sc-7219 FITC, 200 μ g/1 ml.

APPLICATIONS

CD4 (H-370) is recommended for detection of CD4 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), immunohistochemistry (including paraffin-embedded sections) (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 CD4 siRNA (h): sc-29246, CD4 siRNA (m): sc-29997, CD4 shRNA Plasmid (h): sc-29246-SH, CD4 shRNA Plasmid (m): sc-29997-SH, CD4 shRNA (h) Lentiviral Particles: sc-29246-V and CD4 shRNA (m) Lentiviral Particles: sc-29997-V.

Molecular Weight of CD4: 54 kDa.

Positive Controls: CD4 (h): 293T Lysate: sc-114217, HL-60 whole cell lysate: sc-2209 or CCRF-CEM cell lysate: sc-2225.

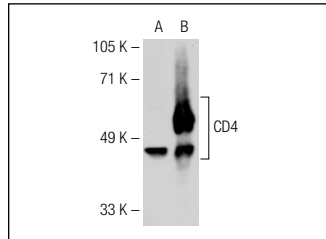
STORAGE

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

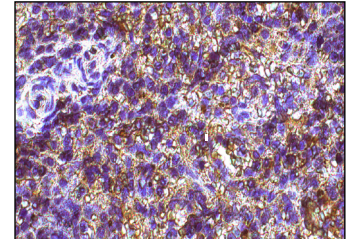
RESEARCH USE

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

DATA



CD4 (H-370): sc-7219. Western blot analysis of CD4 expression in non-transfected: sc-117752 (A) and human CD4 transfected: sc-114217 (B) 293T whole cell lysates.



CD4 (H-370): sc-7219. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane staining of red and white pulp cells.

SELECT PRODUCT CITATIONS

- Schade, A., et al. 2002. Lipid raft heterogeneity in human peripheral blood T lymphoblasts: a mechanism for regulating the initiation of TCR signal transduction. *J. Immunol.* 168: 2233-2239.
- Lumniczky, K., et al. 2002. Local tumor irradiation augments the antitumor effect of cytokine-producing autologous cancer cell vaccines in a murine glioma model. *Cancer Gene Ther.* 9: 44-52.
- Zaldívar, I., et al. 2009. Expression of a modified form of CD4 results in the release of an anti-HIV factor derived from the Env sequence. *J. Immunol.* 183: 1188-1196.
- Lee, J.J., et al. 2010. Increased prevalence of interleukin-17-producing CD4⁺ tumor infiltrating lymphocytes in human oral squamous cell carcinoma. *Head Neck* 33: 1301-1308.
- Hsieh, S.C., et al. 2010. The length of and nonhydrophobic residues in the transmembrane domain of dengue virus envelope protein are critical for its retention and assembly in the endoplasmic reticulum. *J. Virol.* 84: 4782-4797.
- Towne, C., et al. 2010. Efficient transduction of non-human primate motor neurons after intramuscular delivery of recombinant AAV serotype 6. *Gene Ther.* 17: 141-146.
- Shuh, M., et al. 2011. Association of SRC-related kinase Lyn with the interleukin-2 receptor and its role in maintaining constitutive phosphorylation of JAK/STAT in human T-cell leukemia virus type 1-transformed T cells. *J. Virol.* 85: 4623-4627.
- Raposo, R.A., et al. 2011. Proteomic-based identification of CD4-interacting proteins in human primary macrophages. *PLoS ONE* 6: e18690.



Try **CD4 (MT310): sc-19641** or **CD4 (C-1): sc-514746**, our highly recommended monoclonal alternatives to CD4 (H-370). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **CD4 (MT310): sc-19641**.