

CD4 (C-18): sc-1140

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 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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.

Blocking peptide available for competition studies, sc-1140 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as fluorescein conjugate for immunofluorescence, sc-1140 FITC, 200 μ g/1 ml.

APPLICATIONS

CD4 (C-18) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CD4 (C-18) is also recommended for detection of CD4 in additional species, including equine, canine and porcine.

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: CCRF-CEM cell lysate: sc-2225, mouse thymus extract: sc-2406 or HL-60 whole cell lysate: sc-2209.

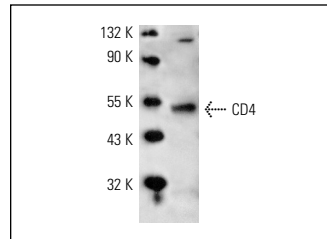
RESEARCH USE

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

STORAGE

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

DATA



CD4 (C-18): sc-1140. Western blot analysis of CD4 expression in mouse thymus extract.

SELECT PRODUCT CITATIONS

- Asnagli, H., et al. 1997. Class I- and class II reactive TCRs coexpressed on CD4⁺ T cells both trigger CD4/CD8 shared and CD4 unique functions. *J. Immunol.* 158: 4533-4542.
- Vaitaitis, G.M. and Wagner, D.H. 2008. High distribution of CD40 and TRAF2 in Th40 T cell rafts leads to preferential survival of this auto-aggressive population in autoimmunity. *PLoS ONE* 3: e2076.
- Chen, C.S., et al. 2008. Enhanced anti-tumor effects achieved in a murine tumor model using combination therapy of recombinant human manganese superoxide dismutase and adriamycin. *Biochem. Biophys. Res. Commun.* 370: 663-668.
- Xu, G., et al. 2009. Activated mammalian target of rapamycin is associated with T regulatory cell insufficiency in nasal polyps. *Respir. Res.* 10: 13.
- Kittipatarin, C., et al. 2010. The interaction of LCK and the CD4 co-receptor alters the dose response of T-cells to interleukin-7. *Immunol. Lett.* 131: 170-181.
- Wang, X., et al. 2012. Pretreatment of rapamycin before allogeneic corneal transplant promotes graft survival through increasing CD4⁺CD25⁺Foxp3⁺ regulatory T cells. *Exp. Clin. Transplant.* 11: 56-62.
- Thongtan, T., et al. 2012. Characterization of putative Japanese encephalitis virus receptor molecules on microglial cells. *J. Med. Virol.* 84: 615-623.
- Deb, G., et al. 2015. Epigenetic induction of tissue inhibitor of matrix metalloproteinase-3 by green tea polyphenols in breast cancer cells. *Mol. Carcinog.* 54: 485-499.


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