



# Mouse Anti-Ferret CD4 monoclonal antibody, clone NN13 (CABT-ZB1072)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Specificity</b>	It reacts with Ferret CD4 It has no cross-reactivity in ELISA with Human CD4, Mouse CD4
<b>Target</b>	CD4
<b>Immunogen</b>	Recombinant Ferret CD4 protein
<b>Isotype</b>	IgG
<b>Source/Host</b>	Mouse
<b>Species Reactivity</b>	Ferret
<b>Clone</b>	NN13
<b>Purification</b>	Protein A purified
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	ELISA(det), FC We recommend the following for sandwich ELISA (Capture - Detection): CABT-ZB759 - CABT-ZB1072 This antibody will detect CD4 in antibody pair set. [ABPR-ZB339]
<b>Preparation</b>	This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, recombinant Ferret CD4. The IgG fraction of the cell culture supernatant was purified by Protein A affinity chromatography.
<b>Format</b>	Purified, Liquid
<b>Concentration</b>	Lot specific

<b>Size</b>	50 µL, 100 µL, 1 mL
<b>Buffer</b>	PBS
<b>Preservative</b>	None
<b>Storage</b>	This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. Preservative-Free. Avoid repeated freeze-thaw cycles.
<b>Ship</b>	Wet ice

## BACKGROUND

### Introduction

T-cell surface glycoprotein CD4, is a single-pass type I membrane protein. CD4 contains three Ig-like C2-type (immunoglobulin-like) domains and one Ig-like V-type (immunoglobulin-like) domain. CD4 is a glycoprotein expressed on the surface of T helper cells, regulatory T cells, monocytes, macrophages, and dendritic cells. The CD4 surface determinant, previously associated as a phenotypic marker for helper/inducer subsets of T lymphocytes, has now been critically identified as the binding/entry protein for human immunodeficiency viruses (HIV). The human CD4 molecule is readily detectable on monocytes, T lymphocytes, and brain tissues. All human tissue sources of CD4 bind radiolabeled gp120 to the same relative degree; however, the murine homologous protein, L3T4, does not bind the HIV envelope protein. CD4 is a co-receptor that assists the T cell receptor (TCR) to activate its T cell following an interaction with an antigen-presenting cell. Using its portion that resides inside the T cell, CD4 amplifies the signal generated by the TCR. CD4 interacts directly with MHC class II molecules on the surface of the antigen-presenting cell via its extracellular domain. The CD4 molecule is currently the object of intense interest and investigation both because of its role in normal T-cell function, and because of its role in HIV infection. CD4 is a primary receptor used by HIV-1 to gain entry into host T cells. HIV infection leads to a progressive reduction of the number of T cells possessing CD4 receptors. Viral protein U (VpU) of HIV-1 plays an important role in downregulation of the main HIV-1 receptor CD4 from the surface of infected cells. Physical binding of VpU to newly synthesized CD4 in the endoplasmic reticulum is an early step in a pathway leading to proteasomal degradation of CD4. Amino acids in both helices found in the cytoplasmic region of VpU in membrane-mimicking detergent micelles experience chemical shift perturbations upon binding to CD4, whereas amino acids between the two helices and at the C-terminus of VpU show no or only small changes, respectively. Paramagnetic spin labels were attached at three sequence positions of a CD4 peptide comprising the transmembrane and cytosolic domains of the receptor. VpU binds to a membrane-proximal region in the cytoplasmic domain of CD4.

### Keywords

CD4; T-cell surface glycoprotein CD4; cell surface glycoprotein CD4; T-cell surface antigen T4/Leu-3

# GENE INFORMATION

Synonyms	CD4; T-cell surface glycoprotein CD4; cell surface glycoprotein CD4; T-cell surface antigen T4/Leu-3
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