

CD4 recombinant protein

CD4 Protein, Mouse, Recombinant (hFc Tag), HPLC-verified

CATALOG #
AAA259246

HOST
HEK293 Cells

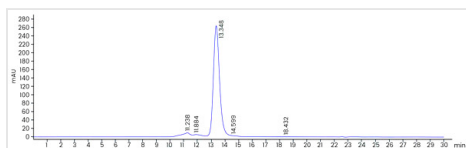
PRODUCT SYNONYMS

CD4; CD4 Protein; Mouse; Recombinant (hFc Tag); HPLC-verified; L3T4 Protein; Ly-4 Protein; CD4 recombinant protein

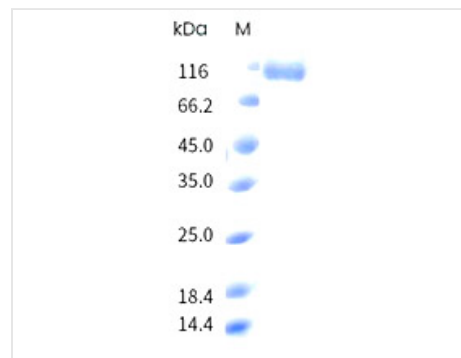
PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>= 95% as determined by SDS-PAGE. = 90% as determined by SEC-HPLC.
Form/Format	Lyophilized from sterile PBS, pH 7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Species	Mouse
Predicted N Terminal	Lys 27
Endotoxin	<1.0 EU per ug protein as determined by the LAL method.
Protein Construction	A DNA sequence encoding the Mouse CD4 (NP_038516.1)(Met1-Thr394) was expressed with the Fc region of human IgG1 at the C-terminus.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

IMAGES



Application Data



Application Data

ADDITIONAL INFORMATION

Related Product Information for CD4 recombinant protein	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.
References	Farrar WL, et al. (1988) Characterization of CD4 glycoprotein determinant-HIV envelope protein interactions: perspectives for analog and vaccine development. Crit Rev Immunol. 8(4): 315-39. Biddison WE, et al. (1989) CD4 expression and function in HLA class II-specific T cells. Immunol Rev. 109: 5-15. Singh SK, et al. (2012) Mapping the interaction between the cytoplasmic domains of HIV-1 viral protein U and human CD4 with NMR spectroscopy. FEBS J. 279(19):3705-14.

NCBI AND UNIPROT INFORMATION

NCBI GI #	7304953
NCBI GeneID	12504
NCBI Accession #	NP_038516.1
NCBI GenBank Nucleotide #	NM_013488.2
UniProt Accession #	P06332
Molecular Weight	24,473 Da
NCBI Official Full Name	T-cell surface glycoprotein CD4
NCBI Official Synonym Full Names	CD4 antigen
NCBI Official Symbol	Cd4
NCBI Official Synonym Symbols	L3T4; Ly-4
NCBI Protein Information	T-cell surface glycoprotein CD4; T-cell differentiation antigen L3T4; T-cell surface antigen T4/Leu-3; T-cell surface glycoprotein CD4 precursor (T-cell surface antigen T4/Leu-3) (T-cell differentiation antigen L3T4)
UniProt Protein Name	T-cell surface glycoprotein CD4
UniProt Gene Name	Cd4
UniProt Entry Name	CD4_MOUSE

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.