Recombinant Human CD4 Protein (Lys26-Trp390), His tagged

Cat. No. CD4-1460H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human CD4 (Lys26-Trp390) fused with His tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	Lys26-Trp390
Description	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 gp12 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

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	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.
Form	Lyophilized powder/frozen liquid
Molecular Mass	41.29 kDa
Purity	>90% as determined by SDS-PAGE.
Notes	For research use only.
Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 centigrade for one week. Store at -20 to -80 centigrade for twelve months from the date of receipt.
Storage Buffer	Supplied as solution form in PBS pH 7.5 or lyophilized from PBS pH 7.5.
Reconstitution	Reconstitute in sterile water for a stock solution.

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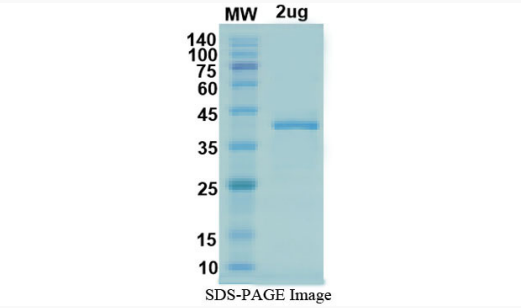
Shipping	They are shipped out with dry ice/blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name	CD4 CD4 molecule [Homo sapiens (human)]
Official Symbol	CD4
Synonyms	CD4; CD4 molecule; CD4 antigen (p55), T cell surface glycoprotein CD4; T-cell surface glycoprotein CD4; CD4 receptor; CD4 antigen (p55); T-cell surface antigen T4/Leu-3; CD4mut;
Gene ID	920
mRNA Refseq	NM_000616
Protein Refseq	NP_000607
MIM	186940
UniProt ID	P01730
SDS-PAGE	

SDS-PAGE Image

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