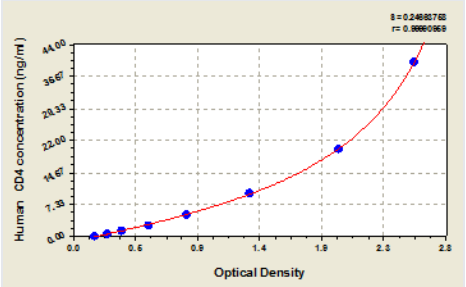
CD4 Molecule (CD4) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	CD4 molecule, ELISA Kit
Full Product Name	Human cluster of differentiation 4, CD4 ELISA Kit
Product Gene Name	CD4 elisa kit
Product Synonym Names	Human cluster of differentiation 4; CD4 ELISA Kit; CD4mut; CD4 antigen; CD4 antigen (p55) ; CD4 receptor; CD4 molecule
Species Reactivity	Human
Samples	Serum, plasma
Detection Range	0.625 ng/ml-40 ng/ml
Sensitivity	0.156 ng/ml
Specificity	This assay has high sensitivity and excellent specificity for detection of Human CD4. No significant cross-reactivity or interference between Human CD4 and analogues was observed.
Preparation and Storage	Unopened test kits should be stored at 2 to 8 degree C upon receipt. Please refer to pdf manual for further storage instructions.
Intra-assay Precision	Intra-assay Precision (Precision within an assay): CV% is less than 8% Three samples of known concentration were tested twenty times on one plate to assess. Inter-assay Precision (Precision between assays): CV% is less than 10% Three samples of known concentration were tested in twenty assays to assess.
Molecular Weight	51,111 Da
OMIM	gene 613949
3D Structure	ModBase 3D Structure for P01730
Detection Wavelength	450 nm
Sample Volume	50-100ul
Protein Biological Process 1	Immunity
Protein Biological Process 3	Adaptive immunity
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.

Related Product Information for CD4 elisa kit	**Introduction:** CD4 (cluster of differentiation 4) is a glycoprotein expressed on the surface of T helper cells, regulatory T cells, monocytes, macrophages, and dendritic cells. It was discovered in the late 1970s and was originally known as leu-3 and T4 (after the OKT4 monoclonal antibody that reacted with it) before being named CD4 in 1984. In humans, the CD4 protein is encoded by the CD4 gene. 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 by recruiting an enzyme, known as the tyrosine kinase lck, which is essential for activating many molecules involved in the signaling cascade of an activated T cell. CD4 also interacts directly with MHC class II molecules on the surface of the antigen presenting cell using its extracellular domain. **Principle of the Assay:** The microtiter plate provided in this kit has been pre-coated with an antibody specific to CD4. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific for CD4 and Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. Then a TMB (3,3',5,5' tetramethyl-benzidine) substrate solution is added to each well. Only those wells that contain CD4, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. The concentration of CD4 in the samples is then determined by comparing the O.D. of the samples to the standard curve.
Other Notes	Small volumes of CD4 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CD4 purchase	MBS702845 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the CD4 molecule, ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing CD4. The ELISA analytical biochemical technique of the MBS702845 kit is based on CD4 antibody-CD4 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CD4 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CD4. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of CD4 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CD4. It may not necessarily be applicable to this product.

NCBI GI #	10835167
NCBI GeneID	920
NCBI Accession #	NP_000607.1
UniProt Primary Accession #	P01730
UniProt Secondary Accession #	Q4ZGK2; Q5U066; Q9UDE5; B2R737; D3DUS5
UniProt Related Accession #	P01730
GenBank Nucleotide #	NM_000616.4
NCBI Official Full Name	T-cell surface glycoprotein CD4 isoform 1
NCBI Official Synonym Full Names	CD4 molecule

NCBI Official Symbol	CD4
NCBI Official Synonym Symbols	CD4mut
UniProt Protein Name	T-cell surface glycoprotein CD4
UniProt Synonym Protein Names	T-cell surface antigen T4/Leu-3; CD_antigen: CD4
Protein Family	T-cell surface glycoprotein
UniProt Gene Name	CD4
UniProt Entry Name	CD4_HUMAN
NCBI Protein Information	T-cell surface glycoprotein CD4; CD4 receptor; CD4 antigen (p55); T-cell surface antigen T4/Leu-3
NCBI Summary for CD4	This gene encodes a membrane glycoprotein of T lymphocytes that interacts with major histocompatibility complex class II antigenes and is also a receptor for the human immunodeficiency virus. This gene is expressed not only in T lymphocytes, but also in B cells, macrophages, and granulocytes. It is also expressed in specific regions of the brain. The protein functions to initiate or augment the early phase of T-cell activation, and may function as an important mediator of indirect neuronal damage in infectious and immune-mediated diseases of the central nervous system. Multiple alternatively spliced transcript variants encoding different isoforms have been identified in this gene. [provided by RefSeq, Aug 2010]
UniProt Comments for CD4	**Function:** Accessory protein for MHC class-II antigen/T-cell receptor interaction. May regulate T-cell activation. Induces the aggregation of lipid rafts.
Research Articles on CD4	**1.** data show that Ag-specific CD4(+) CD25(+) CD134(+) CD39(+) T cells are highly enriched for Treg cells, form a large component of recall responses and maintain a Treg-cell-like phenotype upon in vitro expansion.
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