Recombinant Human CD4/LEU3 Protein (His Tag)

Catalog Number: PKSH030448

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

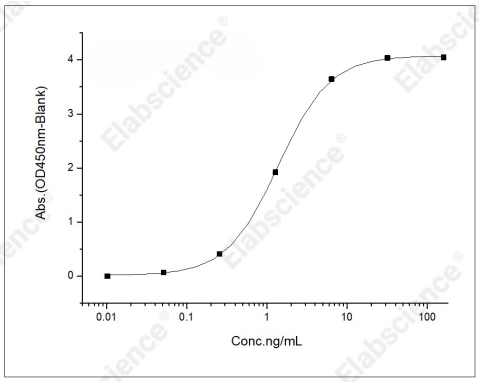
Description

Species	Human
Source	HEK293 Cells-derived Human CD4/LEU3 protein Met 1-Trp 390, with an C-terminal His
Calculated MW	42.2 kDa
Observed MW	46 kDa
Accession	NP_000607.1
Bio-activity	Measured by the ability of the immobilized protein to support the adhesion of NIH-3T3 mouse embryonic fibroblast cells. When cells are added to CD4-coated plates (0.8 μg/mL, 100 μL/well), approximately > 40% will adhere specifically.

Properties

Purity	> 90% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



Immobilized Ibalizumab-Derived Anti-CD4 Antibody, Human IgG4 at 2 μg/mL (100 μL/well) can bind Recombinant Human CD4 / LEU3 Protein (His Tag) (Cat: PKSH030448) , the EC_{50} is 0.6-2.5 ng/mL(QC tested).

Background

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. 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. 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.

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