Recombinant Human CD4/LEU3 Protein (aa 1-208, His Tag)

Catalog Number: PKSH031631

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

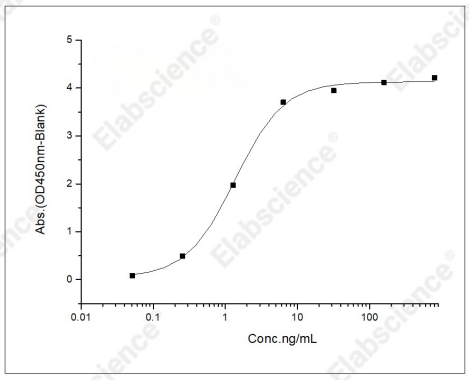
Description

Species	Human
Source	HEK293 Cells-derived Human CD4/LEU3 protein Met 1-Ser 208, with an C-terminal His
Calculated MW	21.7 kDa
Observed MW	26 kDa
Accession	NP_000607.1
Bio-activity	1. Measured by its ability to bind biotinylated GP140-His in a functional ELISA. 2. Measured by the ability of the immobilized protein to support the adhesion of HeLa human cervical epithelial carcinoma cells. When 5 x 10^4 cells/well are added to CD4-coated plates (2. 5 μg/ml and 100 μl/well), approximately 40 %-60 % will adhere specifically after 60 minutes at 37°C.

Properties

Purity	> 94 % 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, 10% Glycerol, 5% Trehalose，1 mM EDTA, pH 7.4.
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 (aa 1-208, His Tag) (Cat: PKSH031631) , the EC_{50} is 0.5-2.5 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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