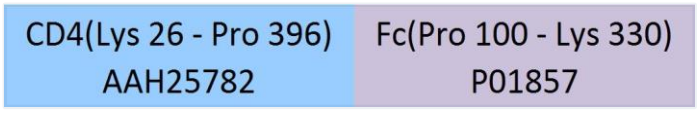
Human CD4 Protein, Fc Tag

Catalog # CD4-H5259

For Research Use Only

Description

Source	Human CD4, Fc Tag (CD4-H5259) is expressed from human 293 cells (HEK293). It contains AA Lys 26 - Pro 396 (Accession # AAH25782). Predicted N-terminus: Lys 26
Predicted N-terminus	Lys 26
Protein Structure	
Molecular Characterization	This protein carries a human IgG1 Fc tag at the C-terminus. The protein has a calculated MW of 67.5 kDa. The protein migrates as 76 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 1.0 EU per μg by the LAL method.
Purity	>95% as determined by SDS-PAGE.

Formulation and Storage

Formulation	Lyophilized from 0.22 μm filtered solution in 50 mM Tris, 100 mM Glycine, pH7.5. Normally trehalose is added as protectant before lyophilization. Contact us for customized product form or formulation.
Reconstitution	Please see Certificate of Analysis for specific instructions.For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.
Storage	For long term storage, the product should be stored at lyophilized state at -20°C or lower.Please avoid repeated freeze-thaw cycles. No activity loss was observed after storage at: • 4-8℃ for 12 months in lyophilized state; • -70℃ for 3 months under sterile conditions after reconstitution.

Background

Background

Cluster of Differentiation 4 (CD4) is also known as T-cell surface antigen T4/Leu-3 (LEU-3) and CD4mut, is a single-pass type I membrane glycoprotein,and is a member of the immunoglobulin superfamily. CD4 expressed on the surface of T helper cells, monocytes, macrophages, and dendritic cells. It has four immunoglobulin domains (D1 to D4) that are exposed on the extracellular surface of the cell: D1 and D3 resemble immunoglobulin variable (IgV) domains. D2 and D4 resemble immunoglobulin constant (IgC) domains. CD4 is a co-receptor that assists the T cell receptor (TCR) 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. The extracellular domain adopts an immunoglobulin-like beta-sandwich with seven strands in 2 beta sheets, in a Greek key topology. CD4 has also been shown to interact with SPG21, Lck and Protein unc-119 homolog. 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. Therefore, medical professionals refer to the CD4 count to decide when to begin treatment for HIV-infected patients.

References

(1) Brady RL, et al., 1993, Science 260 (5110): 979–83.
(2) Zeitlmann, L., et al., 2001, J. Biol. Chem. (United States) 276 (12): 9123–32.
(3) Rudd CE, et al., 2010, J. Immunol. 185 (5): 2645–9.
(4) Rudd CE, et al., 1988, Proc. Natl. Acad. Sci. U.S.A. 85 (14): 5190–4.
(5) Gorska MM, et al., 2004, J. Exp. Med. 199 (3): 369–79.

AMSBIO | www.amsbio.com | info@amsbio.com

UK & Rest of the World
184 Park Drive, Milton Park
Abingdon OX14 4SE, UK
T: +44 (0)1235 828 200
F: +44 (0) 1235 820 482

North America
1035 Cambridge Street,
Cambridge, MA 02141
T: +1 (617) 945-5033 or
T: +1 (800) 987-0985
F: +1 (617) 945-8218

Germany
Bockenheimer Landstr. 17/19
60325 Frankfurt/Main
T: +49 (0) 69 779099
F: +49 (0) 69 13376880

Switzerland
Centro Nord-Sud 2E
CH-6934 Bioggio-Lugano
T: +41(0) 91 604 55 22
F: +41(0) 91 605 17 85

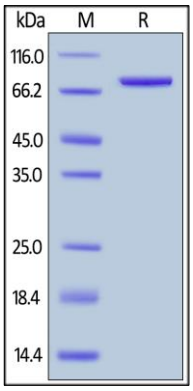
Human CD4 Protein, Fc Tag

Catalog # CD4-H5259

For Research Use Only

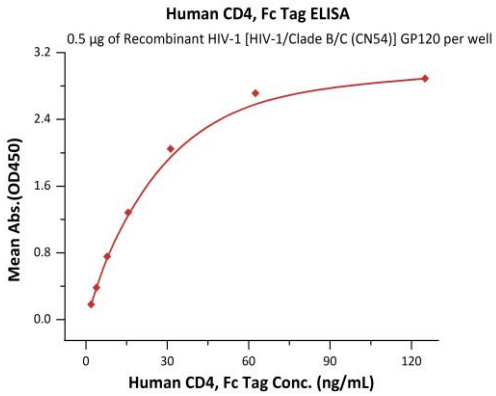
Assay Data

SDS-PAGE Data



Human CD4, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity Data



Immobilized Recombinant HIV-1 [HIV-1/Clade B/C (CN54)] GP120 (Cat. No. GP4-V15227) at 5 μg/mL (100 μL/well) can bind Human CD4, Fc Tag (Cat. No. CD4-H5259) with a linear range of 2-31 ng/mL (QC tested).

AMSBIO | www.amsbio.com | info@amsbio.com

UK & Rest of the World
184 Park Drive, Milton Park
Abingdon OX14 4SE, UK
T: +44 (0)1235 828 200
F: +44 (0) 1235 820 482

North America
1035 Cambridge Street,
Cambridge, MA 02141
T: +1 (617) 945-5033 or
T: +1 (800) 987-0985
F: +1 (617) 945-8218

Germany
Bockenheimer Landstr. 17/19
60325 Frankfurt/Main
T: +49 (0) 69 779099
F: +49 (0) 69 13376880

Switzerland
Centro Nord-Sud 2E
CH-6934 Bioggio-Lugano
T: +41(0) 91 604 55 22
F: +41(0) 91 605 17 85