Data Sheet (Cat.No.TMPY-03742)

TargetMol

CD4 Protein, Rhesus, Recombinant (His)

General Information

Synonyms:	CD4 molecule
Protein Construction:	Lys26-Trp390
Species:	Rhesus
Expression Host:	HEK293 Cells
Accession:	G7N5T8
Molecular Weight:	41.5 kDa (Predicted); 45-52 kDa (Due to glycosylation)

QC Testing

Biological Activity:	Immobilized Rhesus macaque CD4, His Tag at 1 μg/ml (100 μl/well) on the plate. Dose response curve for Anti-CD4 Antibody, hFc Tag with the EC50 of 14.6 ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

CD4, also known as L3T4, T4, and W3/25, is an approximately 55 kDa type I transmembrane glycoprotein that is expressed predominantly on thymocytes and a subset of mature T lymphocytes. It is a standard phenotype marker for the identification of T cell populations.Integral membrane glycoprotein that plays an essential role in the immune response and serves multiple functions in responses against both external and internal offenses. In T-

cells, functions primarily as a coreceptor for MHC class II molecule:peptide complex.

Reference

Farrar WL, et al. (1988) Characterization of CD4 glycoprotein determinant-HIV envelope protein interactions: perspectives for analog and vaccine development. Crit Rev Immunol. 8(4): 315-39.
Biddison WE, et al. (1989) CD4 expression and function in HLA class II-specific T cells. Immunol Rev. 109: 5-15.
Singh SK, et al. (2012) Mapping the interaction between the cytoplasmic domains of HIV-1 viral protein U and human CD4 with NMR spectroscopy. FEBS J. 279(19):3705-14.