Data Sheet (Cat.No.TMPY-04257)

TargetMol

CD83 Protein, Cynomolgus, Rhesus, Recombinant (His)

General Information

Synonyms: CD83 molecule

Protein Construction: Thr20-Glu147

Species: Cynomolgus,Rhesus

Expression Host: HEK293 Cells

Accession: A0A2K5US85

Molecular Weight: 15.43 kDa (predicted); 25-40 kDa (reducing conditions)

QC Testing

Biological Activity: Immobilized Cynomolgus CD83, His Tag at 1 μg/ml (100 μl/well) on the plate. Dose response curve for Biotinylated Anti- CD83 Antibody, hFc Tag with the EC50 of 2.0 ng/ml determined by ELISA.

Purity: > 80 % as determined by SDS-PAGE

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

The cluster of differentiation (CD) system is commonly used as cell markers in Immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then

alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other functions such as cell adhesion. CD83 is considered as a marker of mature dendritic cells as well as an adhesion receptor that binds to resting monocytes and a subset of activated CD8+T cells. In certain conditions, CD83 tended to dimerize or even multimerize through its aberrant intermolecular disulfide bonds. The injection of CD83-Ig can significantly enhance the rate of tumor growth and inhibit the T cell growth.

Reference

Zola H,et al.(2007) CD molecules 2006-human cell differentiation molecules. J Immunol Methods. 318 (1-2): 1-5.
Ho IC,et al.(2009) GATA3 and the T-cell lineage: essential functions before and after T-helper-2-cell differentiation. Nat Rev Immunol. 9 (2): 125-35.
Matesanz-Isabel J,et al.(2011) New B-cell CD molecules. Immunology Letters.134 (2): 104-12
Scholler N,et al.(2002) Cutting Edge: CD83 Regulates the Development of Cellular Immunity. The Journal of Immunology. 168 (6): 2599-602.
Lechmann M,et al.(2002) CD83 on dendritic cells: more than just a marker for maturation. Trends in immunology. 23(6): 273-5.