Data Sheet (Cat.No.TMPY-05440)

TargetMol

CD28H/TMIGD2 Protein, Human, Recombinant (hFc)

General Information

Synonyms: IGPR1;transmembrane and immunoglobulin domain containing 2;IGPR-1;TMIGD2;TPC1

Protein Construction: Leu23-Gly150

Species: Human

Expression Host: HEK293 Cells

Accession: Q96BF3-1

Molecular Weight: 40.7 kDa (Predicted); 50-60 kDa (Due to glycosylation)

QC Testing

Biological Activity: Immobilized Human B7-H7, His Tag at 2 μg/ml (100 μl/well) on the plate. Dose response curve for Human CD28H, hFc Tag with the EC50 of 0.89 μg/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

CD28H is constitutively expressed on all naive T cells. Repetitive antigenic exposure, however, induces a complete loss of CD28H on many T cells, and CD28H negative T cells have a phenotype of terminal differentiation and senescence. After extensive screening in a receptor array, a B7-like molecule, B7 homologue 5 (B7-H5), was identified as a specific ligand for CD28H.

Reference

Rahimi N, Rezazadeh K, Mahoney JE, Hartsough E, Meyer RD. Identification of IGPR-1 as a novel adhesion molecule involved in angiogenesis. Nusrat A, ed. Molecular Biology of the Cell. 2012;23(9):1646-1656.

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