Data Sheet (Cat.No.TMPY-06298)

TargetMol

B7-1 Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	CD28LG1;B7-1;B7.1;BB1;CD28LG;CD80 molecule;B7;LAB7
Protein Construction:	Val35-Asn242
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P33681-1
Molecular Weight:	26.8 kDa (Predicted); 50-70 kDa (Reducing conditions due to glycosylation)

QC Testing

Biological Activity:	Immobilized Human CTLA-4, hFc Tag at 2μg/ml (100μl/well) on the plate. Dose response curve for Biotinylated Human B7-1, His Tag with the EC50 of 1.9μg/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

Cluster of differentiation 80 (also CD80 and B7-1) is a protein found on dendritic cells, activated B cells and monocytes that provides a costimulatory signal necessary for T cell activation and survival. It is the ligand for two different proteins on the T cell surface: CD28 and CTLA-4.

Reference

Greenfield EA, et al. (1998) CD28/B7 costimulation: a review. Crit Rev Immunol. 18(5): 389-418.
Zang X, et al. (2007) The B7 family and cancer therapy: costimulation and coinhibition. Clin Cancer Res. 13(18 Pt 1): 5271-9.
Mir MA, et al. (2008) Signaling through CD80: an approach for treating lymphomas. Expert Opin Ther Targets. 12 (8): 969-79.

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