

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

General Information

Synonyms:	B71;CD80;BB1;LAB7;B7-1;B7.1;B7;CD28LG1;CD80 molecule
Protein Construction:	Val35-Asn242
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P33681-1
Molecular Weight:	26.8 kDa (predicted). Due to glycosylation, the protein migrates to 50-70 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	<ol style="list-style-type: none">1. Immobilized Human B7-1, His Tag at 0.5µg/ml (100µl/Well) on the plate. Dose response curve for Human CTLA-4, hFc Tag with the EC50 0.12µg/ml determined by ELISA.2. Human B7-1, His Tag captured on CM5 Chip via Anti-His Antibody can bind Human CTLA4, hFc Tag with an affinity constant of 1.1nM as determined in SPR assay.
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 a solution filtered through a 0.22 µm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent 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

Merwe V D, P. A. CD80 (B7-1) Binds Both CD28 and CTLA-4 with a Low Affinity and Very Fast Kinetics[J]. Journal of Experimental Medicine, 1997, 185(3):393-404.

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