

B7-1 Protein, Rat, Recombinant (hFc)

General Information

Synonyms:	CD80 molecule
Protein Construction:	A DNA sequence encoding the rat Cd80 (AAB60503.1) (Met1-Gln248) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Ile 39
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	Q62680
Molecular Weight:	51 kDa (predicted)

QC Testing

Biological Activity:	Loaded Recombinant Rat B7-1/CD80 Protein, hFc Tag (Cat#TMPY-00037) on proA Biosensor, can bind Recombinant Rat CD28 Protein, His Tag with an affinity constant of 31.100 μ M as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).
Purity:	> 95 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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 B-lymphocyte activation antigen B7-1 (referred to as B7), also known as CD80, is a member of cell surface immunoglobulin superfamily and is expressed on the surface of antigen-presenting cells including activated B cells, macrophages and dendritic cells. As costimulatory ligands, B7-1 which exists predominantly as dimer and the related protein B7-2, interact with the costimulatory receptors CD28 and cytotoxic T lymphocyte-associated

antigen 4 (CTLA-4) expressed on T cells, and thus constitute one of the dominant pathways that regulate T cell activation and tolerance, cytokine production, and the generation of CTL. The B7/CD28/CTLA4 pathway has the ability to both positively and negatively regulate immune responses. CD80 is thus regarded as promising therapeutic targets for autoimmune diseases and various carcinomas. Cancer Immunotherapy Co-inhibitory Immune Checkpoint Targets Immune Checkpoint Immune Checkpoint Detection: Antibodies Immune Checkpoint Detection: ELISA Antibodies Immune Checkpoint Detection: FCM Antibodies Immune Checkpoint Detection: IHC Antibodies Immune Checkpoint Detection: WB Antibodies Immune Checkpoint Proteins Immune Checkpoint Targets Immunotherapy Targeted Therapy

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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