

B7-2/CD86 Protein, Human, Recombinant (aa 1-239, His)

General Information

Synonyms:	CD86 antigen;B70;B7.2;B7-2;CD28LG2;LAB72
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-His 239) of human B7-2 (NP_008820.2) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Leu 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P42081-3
Molecular Weight:	26.6 kDa (predicted); 55-60 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	<ol style="list-style-type: none">1.Measured by its binding ability in a functional ELISA. Immobilized human CD86 at 20 µg/ml (100 µl/well) can bind human CD28 with a linear range of 32-800 ng/ml.2.Loaded Recombinant Human B7-1 Protein, His Tag on His1K Biosensor, can bind Recombinant Human CD28 Protein, hFc Tag with an affinity constant of 0.46 µM as determined in BLI assay (QC tested).3.Loaded Recombinant Human CD86 Protein, His Tag on His1K Biosensor, can bind Recombinant Human CD28 Protein, hFc Tag with an affinity constant of 2.72 µM as determined in BLI assay (QC tested).
Purity:	> 97 % as determined by SDS-PAGE
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, 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:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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

CD86, also known as B-lymphocyte activation antigen B7-2 (referred to as B70), is a member of the cell surface immunoglobulin superfamily. B7-2 exists predominantly as a monomer on cell surfaces and interacts with two co-stimulatory receptors CD28 and cytotoxic T lymphocyte-associated antigen 4 (CTLA-4) expressed on T cells, and thus induces the signal pathways which regulate T cell activation and tolerance, cytokine production, and the generation of CTL. It is indicated that contacts between B and T helper cells mediated by CD86 encourage signals for the proliferation and IgG secretion of normal B cells and B cell lymphomas. A recent study has revealed that CD86 also promotes the generation of a mature APC repertoire and promotes APC function and survival. CD86 has an important role in chronic hemodialysis, allergic pulmonary inflammation, arthritis, and antiviral responses, and thus is regarded as a promising candidate for immune therapy. 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: IP Antibodies Immune Checkpoint Detection: WB Antibodies Immune Checkpoint Proteins Immune Checkpoint Targets Immunotherapy Targeted Therapy

Reference

- Chen YQ, et al. (2006) CD28/CTLA-4--CD80/CD86 and ICOS--B7RP-1 costimulatory pathway in bronchial asthma. *Allergy*. 61(1): 15-26.
- Rau FC, et al. (2009) B7-1/2 (CD80/CD86) direct signaling to B cells enhances IgG secretion. *J Immunol*. 183(12): 7661-71.
- Dai ZS, et al. (2009) Defective expression and modulation of B7-2/CD86 on B cells in B cell chronic lymphocytic leukemia. *Int J Hematol*. 89(5): 656-63.

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