

B7-2/CD86 Protein, Rat, Recombinant (His)

General Information

Synonyms:	CD86 antigen
Protein Construction:	A DNA sequence encoding the rat CD86 (NP_064466.1) extracellular domain (Met 1-Ile 250) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Pro 30
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	NP_064466.1
Molecular Weight:	26.8 kDa (predicted); 40-70 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized rat CD86 at 2 µg/ml (100 µl/well) can bind mouse CD28 with a linear range of 6.4-160 ng/ml.
Purity:	> 95 % 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:

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

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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