

Human CD86 / B7-2 Protein (His Tag)

Catalog Number: 10699-H08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

B7-2; B7.2; B70; 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.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio Activity:

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 (Cat. No. 10698-H08H) on His1K Biosensor, can bind Recombinant Human CD28 Protein, hFc Tag (Cat. No. 11524-H02H) with an affinity constant of 0.46 µM as determined in BLI assay (Sartorius Octet RED384) (QC tested).
3. Loaded Recombinant Human CD86 Protein, His Tag (Cat. No. 10699-H08H) on His1K Biosensor, can bind Recombinant Human CD28 Protein, hFc Tag (Cat. No. 11524-H02H) with an affinity constant of 2.72 µM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Predicted N terminal: Leu 20

Molecular Mass:

The recombinant human B7-2 consists of 231 amino acids and has a predicted molecular mass of 26.6 kDa. In SDS-PAGE, the apparent molecular mass of rhB7-2 is approximately 55-60 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

CD86, also known as B-lymphocyte activation antigen B7-2 (referred to as B7), 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. 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.

References

1. Chen YQ, et al. (2006) CD28/CTLA-4--CD80/CD86 and ICOS--B7RP-1 costimulatory pathway in bronchial asthma. *Allergy*. 61(1): 15-26.
2. Rau FC, et al. (2009) B7-1/2 (CD80/CD86) direct signaling to B cells enhances IgG secretion. *J Immunol*. 183(12): 7661-71.
3. 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.