

Human CD80 / B7-1 Protein (His & Fc Tag)

Catalog Number: 10698-H03H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

B7; B7-1; B7.1; BB1; CD28LG; CD28LG1; LAB7; B71; Cd28l; Ly-53; Ly53; MIC17; TSA1

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Asn 242) of human B7-1 (NP_005182.1) precursor was fused with the C-terminal His-tagged Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its ability to bind human CD28 in a functional ELISA. 2. Measured by its ability to induce IL2 secretion by Jurkat human acute T cell leukemia cells. The ED₅₀ for this effect is 0.2-0.5µg/mL

Endotoxin:

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

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Val 35

Molecular Mass:

The recombinant human B7-1/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 455 amino acids and predicts a molecular mass of 51.7 kDa. By SDS-PAGE, the apparent molecular mass of rh B7-1/Fc is approximately 80-90 kDa due to the 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

Storage:

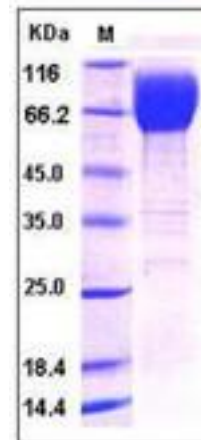
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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.

References

- 1.Greenfield EA, *et al.* (1998) CD28/B7 costimulation: a review. Crit Rev Immunol. 18(5): 389-418.
- 2.Zang X, *et al.* (2007) The B7 family and cancer therapy: costimulation and coinhibition. Clin Cancer Res. 13(18 Pt 1): 5271-9.
- 3.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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