

Human CTLA4 / CD152 Protein (His Tag)

Catalog Number: 11159-H08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

ALPS5; CD; CD152; CELIAC3; CTLA-4; GRD4; GSE; IDDM12

Protein Construction:

A DNA sequence encoding the human CTLA4 (NP_005205.2) extracellular domain (Met 1-Phe 162) was fused with the a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA.
2. Immobilized human CTLA4 (cat: 11159-H08H) at 10 µg/mL (100 µl/well) can bind human B7-1/Fc (cat: 10698-H03H), The EC₅₀ of human B7-1/Fc (cat: 10698-H03H) is 14 ng/mL.
3. Immobilized human CTLA4 (cat: 11159-H08H) at 10 µg/mL (100 µl/well) can bind human B7-2/Fc (cat: 10699-H03H), The EC₅₀ of human B7-2/Fc (cat: 10699-H03H) is 53 ng/mL.
4. Measured by its ability to inhibit IL-2 secretion by stimulated Jurkat human acute T cell leukemia cells. The ED₅₀ for this effect is 0.05-0.3µg/mL when stimulated with 1 µg/mL Recombinant Human B7-1/CD80.

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: Lys 36

Molecular Mass:

The recombinant human CTLA4 consists of 137 amino acids and has a predicted molecular mass of 15 kDa.

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:

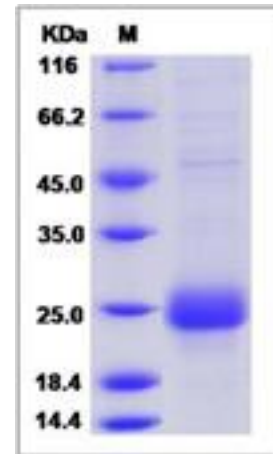
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Cytotoxic T-lymphocyte protein 4, also known as CTLA4 and CD152, is a single-pass type I membrane protein and a member of the immunoglobulin superfamily. It is the second member of the CD28 receptor family. The ligands or counterreceptors for these two proteins are the B7 family members, CD80 (B7-1) and CD86 (B7-2). CTLA4 transmits an inhibitory signal to T cells, whereas CD28 transmits a stimulatory signal. Intracellular CTLA4 is also found in regulatory T cells and may play an important role in their functions. CD152 or cytotoxic T lymphocyte antigen-4 (CTLA-4) is an essential receptor involved in the negative regulation of T cell activation. Because of its profound inhibitory role, CD152 has been considered a sound susceptible candidate in autoimmunity and a persuasive target for cancer immunotherapy. In particular, recent evidence suggests that CD152 is also important in the homeostasis and function of a population of suppressive cells, termed regulatory T cells (Treg).

References

1. Slavik JM, *et al.* (1999) CD28/CTLA-4 and CD80/CD86 families: signaling and function. *Immunol Res.* 19(1): 1-24.
2. Holmberg D, *et al.* (2005) CTLA-4 (CD152) and its involvement in autoimmune disease. *Autoimmunity.* 38(3): 225-33.
3. Chin LT, *et al.* (2008) Immune intervention with monoclonal antibodies targeting CD152 (CTLA-4) for autoimmune and malignant diseases. *Chang Gung Med J.* 31(1): 1-15.

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