Data Sheet (Cat.No.TMPY-03589)

TargetMol

CTLA-4 Protein, Cynomolgus/Rhesus, Recombinant (His)

General Information

Synonyms: cytotoxic T-lymphocyte-associated protein 4

Protein Construction: Ala37-Ser160

Species: Cynomolgus,Rhesus

Expression Host: HEK293 Cells

Accession: G7PL88-1

Molecular Weight: 14.4 kDa (predicted); 25-30 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity: Immobilized Cynomolgus CTLA-4, His Tag at 1 μg/ml (100 μl/well) on the plate. Dose response curve for Cynomolgus B7-1, hFc Tag with the EC50 of 7.4 ng/ml determined by ELISA (QC Test).
Immobilized Cynomolgus CTLA-4, His Tag at 1 μg/ml (100 μl/well) on the plate. Dose response curve for Anti-CTLA-4 Antibody, hFc Tag with the EC50 of 11.2 ng/ml determined by ELISA.
Cynomolgus B7-1, His Tag immobilized on CM5 Chip can bind Cynomolgus CTLA-4, His Tag with an affinity constant of 9.90 nM as determined in SPR assay (Biacore T200).

Purity: > 95 % as determined by SDS-PAGE

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Lyophilized from 0.22μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

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

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).Cancer ImmunotherapyCo-inhibitory Immune Checkpoint TargetsCTLA4 / CD152 Immune Checkpoint ProteinsImmune CheckpointImmune Checkpoint Detection: AntibodiesImmune Checkpoint Detection: ELISA AntibodiesImmune Checkpoint Detection: IP AntibodiesImmune Checkpoint Detection: WB AntibodiesImmune Checkpoint ProteinsImmune Checkpoint TargetsImmunotherapyTargeted Therapy

Reference

Slavik JM,et al.(1999) CD28/CTLA-4 and CD80/CD86 families: signaling and function. Immunol Res. 19(1): 1-24.
Holmberg D,et al.(2005) CTLA-4 (CD152) and its involvement in autoimmune disease. Autoimmunity. 38(3): 225-33.
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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