Data Sheet (Cat.No.TMPY-01955)

TargetMol

CD28 Protein, Mouse, Recombinant (His)

General Information

Synonyms: CD28 molecule

Protein Construction: Asn20-Leu150

Species: Mouse

Expression Host: HEK293 Cells

Accession: P31041

Molecular Weight: 16.78 kDa (predicted); 40-50 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity: Human B7-1, hFc Tag captured on CM5 Chip via Protein A can bind Mouse CD28, His Tag with an affinity constant of 5.12 μM as determined in SPR assay (Biacore T200).

Purity: > 95% as determined by Bis-Tris PAGE

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

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

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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

CD28 (Cluster of Differentiation 28) is a disulphide-bonded glycoprotein belonging to the immunoglobulin (Ig) superfamily, and structurally consists of a single Ig V-like extracellular domain, a transmembrane domain and an intracellular domain. Mouse CD28 is constitutively expressed on the surface of all murine T cells and on developing thymocytes as disulfide-linked homodimers or as monomers. CD28 can binds the B7-1 and B7-2 ligand, and together perform important functions in the T and B cell response pathways. B7/CD28 family members, which can

augment or antagonize T-cell receptor signaling, in the regulation of central and peripheral T-cell tolerance. CD28 is thus involved in T-cell activation, the induction of cell proliferation and cytokine production and promotion of T-cell survival.Cancer ImmunotherapyCo-stimulatory Immune Checkpoint TargetsImmune CheckpointImmune Checkpoint Detection: AntibodiesImmune Checkpoint Detection: ELISA AntibodiesImmune Checkpoint Detection: FCM AntibodiesImmune Checkpoint Detection: IHC AntibodiesImmune Checkpoint Detection: WB AntibodiesImmune Checkpoint TargetsImmunotherapyTargeted Therapy

Reference

Keir ME,et al.(2005) The B7/CD28 costimulatory family in autoimmunity. Immunol Rev. 204: 128-43.
Sansom DM,et al.(2006) The role of CD28 and cytotoxic T-lymphocyte antigen-4 (CTLA-4) in regulatory T-cell biology. Immunol Rev. 212: 131-48.
Bjrgo E,et al.(2010) Novel mechanism of signaling by CD28. Immunol Lett. 129(1): 1-6.