Data Sheet (Cat.No.TMPY-05031)

TargetMol

4-1BB/CD137/TNFRSF9 Protein, Mouse, Recombinant (soluble form, His)

General Information

Synonyms:	CDw137;4-1BB;AI325004;A930040I11Rik;Cd137;ILA;tumor necrosis factor receptor superfamily, member 9;AA408498;Ly63
Protein Construction:	Val24-Leu211
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q8R037
Molecular Weight:	21.2 kDa (predicted); 40-50 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Immobilized Mouse 4-1BB, His Tag at 1 μg/ml (100 μl/well) on the plate. Dose response curve for Human 4-1BB Ligand (Trimer), hFc Tag with the EC50 of 0.51 μg/ml determined by ELISA (QC Test). Immobilized Mouse 4-1BB, His Tag at 1 μg/ml (100 μl/well) on the plate. Dose response curve for Mouse 4-1BB Ligand, hFc Tag with the EC50 of 2.4 ng/ml determined by ELISA.
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:

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

CD137 (also known as 4-1BB) is a surface co-stimulatory glycoprotein originally described as present on activated T lymphocytes, which belongs to the tumor necrosis factor (TNF) receptor superfamily. It is expressed mainly on

activated CD4+and CD8+T cells, and binds to a high-affinity ligand (4-1BBL) expressed on several antigen-presenting cells such as macrophages and activated B cells. Upon ligand binding, 4-1BB is associated with the tumor necrosis factor receptor-associated factors (TRAFs), the adaptor protein which mediates downstream signaling events including the activation of NF-kappaB and cytokine production. 4-1BB signaling either by binding to 4-1BBL or by antibody ligation delivers signals for T-cell activation and growth, as well as monocyte proliferation and B-cell survival, and plays an important role in the amplification of T cell-mediated immune responses. In addition, CD137 and CD137L are expressed in different human primary tumor tissues, suggesting that they may influence the progression of tumors. Crosslinking of CD137 on activated T cells has shown promise in enhancing anti-tumor immune responses in murine models, and agonistic anti-CD137 antibodies are currently being tested in phase I clinical trials. Soluble forms of CD137 (sCD137) are generated by differential splicing. sCD137 can bind to CD137 ligand to antagonize the costimulatory activities of the membrane-bound CD137 and reduce T cell proliferation and IL-2 secretion.Cancer ImmunotherapyCo-stimulatory Immune Checkpoint TargetsImmune CheckpointImmune Checkpoint Detection: AntibodiesImmune Checkpoint Detection: ELISA AntibodiesImmune Checkpoint ProteinsImmune Checkpoint TargetsImmunotherapyTargeted Therapy

Reference

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