Data Sheet (Cat.No.TMPY-05819)

TargetMol

4-1BB Ligand/TNFSF9 Protein, Human, Recombinant (Avi & Fc), Biotinylated

General Information

Synonyms:	4-1BBL;4-1BB-L;CD137L;tumor necrosis factor (ligand) superfamily, member 9
Protein Construction:	A DNA sequence encoding the human TNFSF9 (NP_003802.1) (Arg71-Glu254) was expressed with a N-terminal AVI tag followed by a Fc region of human IgG1 tag. The purified protein was biotinylated in vitro. Predicted N terminal: Arg 71
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P41273
Molecular Weight:	47.98 kDa (predicted)

QC Testing

Biological Activity:	1. Immobilized 4-1BB-Fch at 10 μg/mL (100 μL/well) can bind S3-Avi-Fc-TNFSF9 , the EC50 of S3-Avi-Fc-TNFSF9 is 7.0-20 ng/mL. 2. Measured by it's ability to induce IL-8 secretion by HT1080 transfected with human CD137. The ED50 for this effect is typically 0.25-1.5 μg/mL.
Purity:	> 95 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

4-1BB ligand is the high affinity ligand of 4-1BB, also known as CD137L or TNFSF9. It is shown to be a type II surface glycoprotein belonging to the TNF superfamily. Expression of 4-1BBL is restricted to APCs, such as dendritic

cells, macrophages, and activated B cells. Members of the TNF-TNF receptor superfamily have been shown to play critical roles in regulating cellular activation, differentiation and apoptosis. Several studies have reported that 4-1BBL/4-1BB interaction provided a co-stimulatory signal to T cells, and increased T cell proliferation and cytokines production. In addition, 4-1BBL is involved in cancers, infectious diseases and autoimmune diseases.Cancer ImmunotherapyCo-stimulatory Immune Checkpoint TargetsImmune CheckpointImmune Checkpoint Detection: AntibodiesImmune Checkpoint Detection: ELISA AntibodiesImmune Checkpoint Detection: FCM AntibodiesImmune Checkpoint Detection: ICC AntibodiesImmune Checkpoint TargetsImmunotherapyTargeted Therapy

Reference

Cheung CT, (2007) Neutralizing anti-4-1BBL treatment improves cardiac function in viral myocarditis. Lab Invest. 87 (7): 651-61.

Wang C, et al. (2009) Immune regulation by 4-1BB and 4-1BBL: complexities and challenges. Immunol Rev. 229(1): 192-215.

HAbib-Agahi M, et al. (2009) 4-1BBL costimulation retrieves CD28 expression in activated T cells. Cell Immunol. 256 (1-2): 39-46.