Data Sheet (Cat.No.TMPY-00959)

4-1BB Ligand/TNFSF9 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	4-1BBL;Cd137l;tumor necrosis factor (ligand) superfamily, member 9;4-1BB-L;AI848817; Ly63l
Protein Construction:	A DNA sequence encoding the extracellular domain (Arg 104-Glu 309) of mouse TNFSF9 (NP_033430.1) precursor was expressed with a N-terminal polyhistidine tag. Predicted N terminal: His
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P41274
Molecular Weight:	25 kDa (predicted); 40-45 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized recombinant mouse 4-1BB Ligand at 20 μg/ml (100ul/well) can bind human 4-1BB with a linear range of 15.6-500 ng/ml.
Purity:	> 97 % 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.