Data Sheet (Cat.No.TMPY-00878)

TargetMol

MD1 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	lymphocyte antigen 86;MD-1;MD1
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Ser 162) of mouse LY86 (NP_034875.1) precursor was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Asp 20
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	O88188
Molecular Weight:	18 kDa (predicted); 24-30 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 92 % 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

MD-1 and MD-2 are secretory glycoproteins that exist on the cell surface in complexes with transmembrane proteins. MD-1 is anchored by radioprotective 15 (RP15) which is a molecule containing leucine-rich repeats and is expressed on B cells, dendritic cells, and macrophages, while MD-2 is associated with TLR4. MD-1 is required for efficient RP15 cell surface expression and function. It is indicated that the RP15/MD1 complex, in conjunction with

TLR4, mediates the innate immune response to LPS in B cells, and also plays a role in protecting against apoptosis, B-cell proliferation, etc. Mouse MD-1 cDNA encodes a 162 amino acid precursor protein with a putative 19 aa signal peptide and two potential N-linked glycosylation sites. It shares 4% and 66% amino acid sequence identity with chicken and human MD-1 respectively. MD-1 is mainly expressed in the spleen, and also detectable in the liver, brain, thymus, and kidney.

Reference

Miura Y.,et al.,(1998), RP105 is associated with MD-1 and transmits an activation signal in human B cells. Blood 92: 2815-2822.

Begum N.A.,et al., (1999), Human MD-1 homologue is a BCG-regulated gene product in monocytes: Its identification by differential display.Biochem. Biophys. Res. Commun. 256:325-329.

Mungall A.J.,et al.,(2003), The DNA sequence and analysis of human chromosome 6.Nature 425:805-811.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481