# Data Sheet (Cat.No.TMPY-03999)

TargetMol

## MD2/LY96 Protein, Mouse, Recombinant (hFc)

### General Information

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| Synonyms: | lymphocyte antigen 96;ESOP-1;MD2;MD-2 |
| Protein Construction: | A DNA sequence encoding the mouse LY96 (Q9JHF9) (Met1-Asn160) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Glu 19 |
| Species: | Mouse |
| Expression Host: | HEK293 Cells |
| Accession: | Q9JHF9 |
| Molecular Weight: | 43.4 kDa (predicted); 47 kDa (reducing conditions) |

### QC Testing

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| 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: | > 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

LY96 (Lymphocyte Antigen 96, also known as ESOP-1) is a Protein Coding gene. 2 alternatively spliced human isoforms have been reported. This gene encodes a protein that associates with toll-like receptor 4 on the cell surface and confers responsiveness to lipopolysaccharide (LPS), thus providing a link between the receptor and LPS signaling. LY-96 also cooperates with TLR2 in the response to cell wall components from Gram-positive and Gram-negative bacteria. It enhances the TLR4-dependent activation of NF-kappa-B. ESOP-1 has 16 amino acids,

the sequence of which shows 64% identity with human ESOP-1/MD-2. ESOP-1 mRNA is highly expressed in the mouse embryos at 7.5 days after coitus. Diseases associated with LY96 include Melioidosis and Intestinal Botulism.

Reference

Shimazu R.,et al.,(1999), MD-2, a molecule that confers lipopolysaccharide responsiveness on Toll-like receptor 4. J. Exp. Med. 189:1777-1782.

Kato K.,et al., (2000), ESOP-1, a secreted protein expressed in the hematopoietic, nervous, and reproductive systems of embryonic and adult mice.Blood 96:362-364.

Schromm A.B.,et al.,(2001), Molecular genetic analysis of an endotoxin nonresponder mutant cell line. A point mutation in a conserved region of MD-2 abolishes endotoxin-induced signaling.J. Exp. Med. 194:79-88.



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