# Data Sheet (Cat.No.TMPY-02454)

TargetMol

## CD84 Protein, Mouse, Recombinant (His)

### General Information

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|---|---|
| Synonyms: | CD84 molecule;A130013D22Rik;CDw84;SLAMF5 |
| Protein Construction: | A DNA sequence encoding the mouse CD84 isoform 1 (Q18PI6-1) extracellular domain (Met 1-Val 221) was expressed, with a polyhistidine tag at the C-terminus. Predicted N terminal: Lys 22 |
| Species: | Mouse |
| Expression Host: | HEK293 Cells |
| Accession: | Q18PI6-1 |
| Molecular Weight: | 24 kDa (predicted); 37-42 kDa (reducing condition, due to glycosylation) |

### QC Testing

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|---|---|
| Biological Activity: | Measured by its ability to bind biotinylated recombinant human SH2D1A in a functional ELISA. |
| 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

The CD2 family receptors are type I transmembrane glycoproteins belonging to immunoglobulin (Ig) superfamily characterized by a membrane-proximal Ig constant 2 (C2) domain and a membrane-distal variable (V) domain that is responsible for ligand recognition. CD84, also known as LY9B and SLAMF5, is a homophilic member of the SLAM (signaling lymphocyte activation molecule) subfamily of the CD2 family. The SLAM family receptorsmediate

signal transduction through the interaction of its ITSM (immunoreceptor tyrosine-based switch motifs) in the intracellular region and the SH2 domain of adaptor molecules SAP (SLAM-associated protein) and EAT-2 (EWS-activated transcript 2), and accordingly modulate both adaptive and innate immune responses. The CD84-CD84 interaction was independent of its cytoplasmic tail. Thus, CD84 is its own ligand and acts as a costimulatory molecule. CD84 is expressed on cells from almost all hematopoietic lineages and on CD34+ hematopoietic progenitor cells, suggesting that CD84 serves as a marker for committed hematopoietic progenitor cells.

Reference

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Tangye SG,et al.(2002) CD84 is up-regulated on a major population of human memory B cells and recruits the SH2 domain containing proteins SAP and EAT-2. Eur J Immunol. 32(6): 1640-9.
Zaiss M,et al.(2003) CD84 expression on human hematopoietic progenitor cells. Exp Hematol. 31(9): 798-805.
Tangye SG,et al.(2003) Functional requirements for interactions between CD84 and Src homology 2 domain-containing proteins and their contribution to human T cell activation. J Immunol. 171(5): 2485-95.
Yan Q,et al.(2007) Structure of CD84 provides insight into SLAM family function. Proc Natl Acad Sci U S A. 104(25): 10583-8.