

## CD84 Protein, Human, Recombinant (His)

### General Information

Synonyms:	LY9B;mCD84;CD84 molecule;hCD84;SLAMF5
Protein Construction:	Lys22-Arg220
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9UIB8
Molecular Weight:	23.1 kDa (predicted); 35-52 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:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### 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 receptors mediate 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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- 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.

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