



**LD Biopharma, Inc.**  
9924 Mesa Rim Road Suite B  
San Diego, CA 92121  
Tel: 858-876-8266  
<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human CD18 Protein  
**Catalog Number:** hRP-1057  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

The product of human CD18 gene belongs to the integrin b chain family of proteins. Integrins are integral cell-surface proteins composed of an alpha chain and a beta chain. This gene encodes the integrin b chain b 2. A given chain may combine with multiple partners resulting in different integrins. For example, b 2 combines with a L chain to form the integrin LFA-1, and combines with the a M chain to form the integrin Mac-1. Integrins are known to participate in cell adhesion as well as cell-surface mediated signalling. Defects in this gene are the cause of leukocyte adhesion deficiency type I (LAD1). Two transcript variants encoding the same protein have been identified for this gene.

Full-length extracellular domain of human CD18 cDNA (23 - 700 aa, derived from BC005861) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (31aa) fusion at its N-terminal and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

**Gene Symbol:** CD18 (ITGB; LAD; LCAMB; LFA-1; MAC-1; MF17; MFI7)  
**Accession Number:** NP\_000202  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 0.20 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

### Key References

Rosetti,F., et al., *Human lupus serum induces neutrophil-mediated organ damage in mice that is enabled by Mac-1 deficiency*. J. Immunol. 189 (7), 3714-3723 (2012)



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Jawhara,S., et al., *Integrin alphaXbeta(2) is a leukocyte receptor for Candida albicans and is essential for protection against fungal infections.* J. Immunol. 189 (5), 2468-2477 (2012)

Verma,N.K., et al., *Leukocyte function-associated antigen-1/intercellular adhesion molecule-1 interaction induces a novel genetic signature resulting in T-cells refractory to transforming growth factor-beta signaling.* J. Biol. Chem. 287 (32), 27204-27216 (2012)

## **Applications**

1. May be used for in vitro human integrin b chain mediated leukocyte function regulation study with this protein as either coating matrix protein or soluble factor.
2. May be used for protein-protein interaction assay development.
3. As antigen for specific antibody production.

## **Quality Control**

1. Purity: > 90% by SDS-PAGE.

## **Recombinant Protein Sequence**

MASMTGGQQMGRGHHHHHGNLYFQGGFELQECTKFKVSSCRECI ESGPGCTWCQKLNFTGPG  
DPDSIRCDTRPQLLMRGCAADDIMDPTSLAETQEDHNGGQKQLSPQKVTLYLRLPGQAAAFNVTF  
RRAKGYPIDLYYLMDLSSMLDDLNRNVKLLGGDLLRALNEITESGRIGFGSFVDKTVLPFVNTH  
PDKLRNPCPNKEKECQPPFAFRHVLKLTNNSNQFQTEVGKQLISGNLDAPEGGLDAMMQVAACP  
EEIGWRNVTRLLVFATDDGFHFAGDGKLGAILTPNDGRCHLEDNLYKRSNEFDYPSVGQLAHKL  
AENNIQPIFAVTSRMVKTYEKLTEIIPKSAVGELSESSNVVHLIKNAYNKLSSRVFLDHNALP  
DTLKVTYDSFCSNGVTHRNQPRGDCDGVQINVPITFQVKVTATECIEQESFVIRALGF'TDIVTV  
QVLPQCECRCDQSRDRSLCHGKGFLECGICRCDTGYIGKNCECQTQGRSSQELEGSCRKDNNS  
IICSLGDCVCGQCLCHTSDVPGKLIYGQYCECDTINCERYNGQVCGGPGRGLCFGKCRCHPG  
FEGSACQCERTTEGCLNPRRVECSGRGRRCNVCECHSGYQLPLCQCEPCGCPSPCGKYISCAEC  
LKFEKGFPGKNCSAACPLQLSNNPVKGRGTCKERDSEGCWVAYTLEQQDGM DRYLIYVDESREC  
VAGPN