



**LD Biopharma, Inc.**  
7384 Trade Street, Suite B  
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Tel: 858-876-8266  
<http://www.ldbiopharma.com>

## **- PRODUCT DATA SHEET -**

**Name of Product:** Recombinant Human CD36 Protein  
**Catalog Number:** HRP-1876  
**Manufacturer:** LD Biopharma, Inc.

### **Introduction**

The protein encoded by human platelet glycoprotein 4 (PG4, CD36) gene is the fourth major glycoprotein of the platelet surface and serves as a receptor for thrombospondin in platelets and various cell lines. Since thrombospondins are widely distributed proteins involved in a variety of adhesive processes, this protein may have important functions as a cell adhesion molecule. It binds to collagen, thrombospondin, anionic phospholipids and oxidized LDL. It directly mediates cytoadherence of *Plasmodium falciparum* parasitized erythrocytes and it binds long chain fatty acids and may function in the transport and/or as a regulator of fatty acid transport as resulting formation of CD36 clusters initiates signal transduction and internalization of receptor-ligand complexes. Cellular responses to these ligands are involved in angiogenesis, inflammatory response, fatty acid metabolism, taste and dietary fat processing in the intestine. Mutations in this gene cause platelet glycoprotein deficiency. CD36 as a co-receptor for TLR4:TLR6 heterodimer, promotes inflammation in monocytes/macrophages. Multiple alternatively spliced transcript variants have been found for this gene. Recent data indicated that more than 97% of human serous ovarian tumor over-expression CD36, which may be served as potential therapeutic target using CD36 specific binding ligand, such as cyclic psap peptide.

Full-length extracellular domain of human CD36 cDNA (30 – 409aa) was constructed with codon optimization gene synthesis and expressed with a human N-terminalT7-His-TEV cleavage site Tag (29aa) fusion. This protein was 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:** CD36 (BDPLT10; CHDS7; FAT; GP3B; GPIV; SCARB3)  
**Accession Number:** NP\_000063  
**Species:** Human  
**Size:** 50 µg / Vial



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**Composition:** 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.

**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

## Key References

Suming Wang, et al., *Development of a prosaposin-derived therapeutic cyclic peptide that targets ovarian cancer via the tumor microenvironment*. *Science Translational Medicine*. 09 Mar 2016: Vol. 8, Issue 329, pp. 329ra34. (2016)

Alshehri OM, et al., *Activation of glycoprotein VI (GPVI) and C-type lectin-like receptor-2 (CLEC-2) underlies platelet activation by diesel exhaust particles and other charged/hydrophobic ligands*. *Biochem. J.* 468 (3), 459-473 (2015)

Jay AG, et al., *CD36 binds oxidized low density lipoprotein (LDL) in a mechanism dependent upon fatty acid binding*. *J. Biol. Chem.* 290 (8), 4590-4603 (2015)

## Applications

- May be used for study CD36 mediated ligand-specific signal transduction and internalization of receptor-ligand complexes regulations in angiogenesis, inflammatory response, fatty acid metabolism, taste and dietary fat processing for various cells in vitro using recombinant CD36 protein either as soluble factor or as coating matrix protein.
- May be used for CD36 protein-protein interaction assay.
- Potential biomarker protein for monitoring prognosis for ovarian cancer, et al.
- High purified native CD36 extracellular domain, which may be used for specific antibody production.

## Quality Control

Purity: > 92 % by SDS-PAGE.

## Recombinant Human CD36 Protein Sequence (49.9 kD)



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MASMTGGQQMGRGHHHHHENLYFQGGEFGDLLIQKTIKKQVVLEEGTIAFKNWVKTGTEVYRQ  
FWIFDVQNPQEVMMNSSNIQVKQRGPYTYRVRF LAKENV TQDAEDNTVSFLQPNGAIFEPSLSV  
GTEADNFTVLNLAVAAAASHIYQNQFVQMILNSLINKSKSSMFQVRTLRELLWGYRDPFLSLVPY  
PVT TTVGLFY PYNNTADGVYKVFNGKDNISKVAIIDTYKGKRNL SYWESHCDMINGTDAASFPP  
FVEKSQVLQFFSSDICRSIYAVFESDVNLKGI PVYRFVLP SKAFASPVENPDNYCFCTEKIISK  
NCTSYGVLDISKCKEGRPVYISLPHFLYASPDVSEPIDGLNPNEEEHRTYLDIEPITGFTLQFA  
KRLQVNLLVKPSEKIQVLKNLK RNYIVPILWLN ETGTIGDEKANMFRSQVTGKIN