



**LD Biopharma, Inc.**  
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## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human CD204 Protein  
**Catalog Number:** hRP-1014  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human CD204 gene encodes the class A macrophage scavenger receptors types I & II (Isoform-II), which include three different types (I, II, III) generated by alternative splicing of MSR1 gene. These receptors or isoforms are macrophage-specific trimeric integral membrane glycoproteins and have been implicated in many macrophage-associated physiological and pathological processes including atherosclerosis, Alzheimer's disease, and host defense. The isoforms type I and II are functional receptors and are able to mediate the endocytosis of modified low density lipoproteins (LDLs). CD204 has been implicated in the pathologic deposition of cholesterol in arterial walls during atherogenesis.

Full-length human CD204 extracellular domain cDNA (77 - 451 aa, Isoform II, derived from BC063878) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) 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:** CD204 (MSR1; phSR1; SCARA1; SR-A; SRA)  
**Accession Number:** NP\_002436  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 0.25 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

Segers,F.M., et al., *Design and validation of a specific scavenger receptor class AI*



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*binding peptide for targeting the inflammatory atherosclerotic plaque. Arterioscler. Thromb. Vasc. Biol. 32 (4), 971-978 (2012)*

Yang,H., et al., *Interleukin-10 down-regulates oxLDL induced expression of scavenger receptor A and Bak-1 in macrophages derived from THP-1 cells. Arch. Biochem. Biophys. 512 (1), 30-37 (2011)*

Chen,Y., et al., *A tumor suppressor function of the Msr1 gene in leukemia stem cells of chronic myeloid leukemia. Blood 118 (2), 390-400 (2011)*

Yu,X., et al., *Pattern recognition scavenger receptor CD204 attenuates Toll-like receptor 4-induced NF-kappaB activation by directly inhibiting ubiquitination of tumor necrosis factor (TNF) receptor-associated factor 6. J. Biol. Chem. 286 (21), 18795-18806 (2011)*

## **Applications**

1. May be used as coating or soluble factor for in vitro human CD204 mediated macrophage scavenger receptor activities regulation study.
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**

MASMTGGQQMGRGHHHHHGNLYFQGGEKWETKNCSVSSTNANDITQSLTGKGNDSSEEMRFQE  
VFMEHMSNMEKRIQHILDMEANLMDTEHFQNFSMTTDQRFNDILLQLSTLFSVQGHGNAIDEI  
SKSLISLNTTLLDLQLNIENLNGKIQENTFKQQEEISKLEERVYNVSAEIMAMKEEQVHLEQEI  
KGEVKVLNNITNDLRLKDWEHSQTLRNITLIQGPPGPPGEEKGDRGPTGESGPRGFPGPIGPPGL  
KGDRGAIGFPGSRGLPGYAGRPGNSGPKGQKGEKSGNTLTPFTKVRVVGSGPHEGRVEILHS  
GQWGTICDDRWEVVRVGVCRSLGYPGVQAVHKA AHFGQGTGPIWLNVEVFCFGRESSIEECKIR  
QWGTRACSHSEDAGVTCTL