



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

**Name of Product:** Recombinant Human LILRA2 Protein  
**Catalog Number:** hRP-1954  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human leukocyte immunoglobulin-like receptor A2 (LILRA2) gene encodes a member of a family of immunoreceptors that are expressed predominantly on monocytes and B cells, and at lower levels on dendritic cells and natural killer cells. The encoded protein is an activating receptor that inhibits dendritic cell differentiation and antigen presentation and suppresses innate immune response. Recent data indicated that that immunoglobulins (N-terminally degraded IgM is a specific LILRA2 ligand) disrupted by microbial pathogens infection (Microbial proteases degrade a variety of host proteins) are specifically detected by LILRA2, so regulating LILRA2 activities in vivo may provide some benefits for anti-infection or various vaccine development.

Full-length extracellular domain of human LILRA2 cDNA (24-449aa, Isoform-B) was constructed with codon optimization gene synthesis technology and expressed with a small T7-His-TEV cleavage site Tag (31aa) fusion at its N-terminal. 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:** LILRA2 (CD85H; ILT1; LIR-7)  
**Accession Number:** NP\_006857  
**Species:** Human  
**Size:** 25 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, 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.



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## Key References

Hirayasu K, et al., *Microbially cleaved immunoglobulins are sensed by the innate immune receptor LILRA2*. Nat Microbiol 1 (6), 16054 (2016)

Lu HK, et al., *LILRA2 selectively modulates LPS-mediated cytokine production and inhibits phagocytosis by monocytes*. PLoS ONE 7 (3), E33478 (2012)

Jones DC, et al., *Alternative mRNA splicing creates transcripts encoding soluble proteins from most LILR genes* Eur. J. Immunol. 39 (11), 3195-3206 (2009)

## Applications

1. May be used for in vitro LILRA2 mediated cell signaling pathway regulation study for monocytes and B cells with this protein either as soluble factor or as coating matrix protein.
2. May be used for protein-protein interaction assay.
3. As enzymatic substrate for various proteases.
4. Potential therapeutic protein for regulating anti-infection drug development or vaccine/enhancer development.
5. As immunogen for specific antibody production.

## Quality Control

Purity: > 90% by SDS-PAGE.

## Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGFEGSGHLPKPTLWAEPGSVIIQGSVTLRCQGSLOAE  
EYHLYRENKSASWVRRIQEPGKNGQFP I PSITWEHAGRYHCQYSHNHSSEYSDPLELVVTGAY  
SKPTLSALPSPVVTLGGNVTLQCVSQVAFDGFILCKEGEDEHPQRLNSHSHARGWSWAIFSVGP  
VSPSRRWSYRCYAYDSNSPYVWVSLPSDLELLVPGVSKKPSLSVQPGPMVAPGESLTLQCVSDV  
GYDRFVLYKEGERDFLQRPGWQPQAGLSQANFTLGPVSPSHGGQYRCYSAHNLSSEWSAPSDPL  
DILITGQFYDRPSLSVQPVPTVAPGKNVTLQCQSRGQFHTFLLTKEGAGHPPLHLRSEHQAAQN  
QAEFRMGPV TSAHVGT YRCYSSLSNPYLLSLPSDPLELVVSEAAETLSPSQNKTDSTTTSLGQ  
HPQDYTVEN