



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

**Name of Product:** Recombinant Human CD22 Protein  
**Catalog Number:** hRP-2010  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human CD22 encodes a membrane protein which mediates B-cell / B-cell interactions. It may be involved in the localization of B-cells in lymphoid tissues. CD22 binds sialylated glycoproteins; one of which is CD45. Preferentially binds to alpha-2,6-linked sialic acid. The sialic acid recognition site can be masked by cis interactions with sialic acids on the same cell surface. Upon ligand induced tyrosine phosphorylation in the immune response seems to be involved in regulation of B-cell antigen receptor signaling. CD22 plays a role in positive regulation through interaction with Src family tyrosine kinases and may also act as an inhibitory receptor by recruiting cytoplasmic phosphatases via their SH2 domains that block signal transduction through dephosphorylation of signaling molecules.

Full-length extracellular domain of human CD22 cDNA (2 – 515aa , Isoform-5) was constructed with codon optimization gene synthesis and was expressed with a 29aa N-terminal-T7-His-TEV cleavage site Tag fusion 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:** CD22  
**Accession Number:** NP\_001265346  
**Species:** Human  
**Size:** 10 µg / Vial  
**Composition:** 0.10 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



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Eakin AJ, et al., *Siglec-1 and -2 as potential biomarkers in autoimmune disease*. Proteomics Clin Appl 10 (6), 635-644 (2016)

Macauley MS, et al., *Unmasking of CD22 Co-receptor on Germinal Center B-cells Occurs by Alternative Mechanisms in Mouse and Man*. J. Biol. Chem. 290 (50), 30066-30077 (2015)

Sun M, et al., *Novel synthesizing method of pH-dependent doxorubicin-loaded anti-CD22-labelled drug delivery Nanosystem*. Drug Des Devel Ther 9, 5123-5133 (2015)

Jiang Y, et al., *MicroRNA-19a and CD22 Comprise a Feedback Loop for B Cell Response in Sepsis*. Med. Sci. Monit. 21, 1548-1555 (2015)

Doody GM, et al., *A role in B cell activation for CD22 and the protein tyrosine phosphatase SHP*. Science 269 (5221), 242-244 (1995)

## Applications

1. May be used for in vitro CD22 mediated B cell activation/ differentiation regulation study with this protein either as soluble factor or as coating matrix protein.
2. May be used for protein-protein interaction assay.
3. Potential anti- B lymphoma target protein for its treatment using CD22 blocking antibodies.
4. As immunogen for specific antibody production.

## Quality Control

Purity: > 90% by SDS-PAGE.

## Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGEFWLLEGVPMRQAAVTSTSLTIKSVFTRSELKFSPQW  
SHHGKIVTCQLQDADGKFLSNDTVQLNVKHTPKLEIKVTPSDAIVREGDSVTMTCEVSSSNPEY  
TTVSWLKDGTSLKKQNTFTLNLREVTKDQSGKYCCQVSNDVGPGRSEEVFLQVQYAPEPSTVQI  
LHSPAVEGSQVEFLCMSLANPLPTNYTWYHNGKEMQGRTEEKVHIPKILPWHAGTYSCVAENIL  
GTGQRGPGAELDVQYPPKKVTTVIQNPMPPIREGDVTTLSCNYNSSNPSVTRYEWKPHGAWEEPS  
LGVLKIQNVGWDNTTIIACAACNSWCSWASPVALNVQYAPRDVVRKIKPLSEIHSGNSVSLQCD  
FSSSHPKQVFFWEKNGRLLGKESQLNFDISIPEDAGSYSCWVNNSIGQTASKAWTLEVLYAPR  
RLRVSMSPGDQVMEGKSATLTCESDANPPVSHYTWFDWNNQSLPYHSQKLRLEPVKVQHSGAYW  
CQGTNSVGKGRSPLSTLTVYYSPETIGRR