



**LD Biopharma, Inc.**  
7384 Trade Street, Suite B  
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## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human FCN1 Protein  
**Catalog Number:** HRP-2044  
**Manufacturer:** LD Biopharma, Inc. USA

### Introduction

Human Ficolin-1 (FCN1) gene encodes an extracellular lectin, which functioning as a pattern-recognition receptor in innate immunity. It binds the sugar moieties of pathogen-associated molecular patterns (PAMPs) displayed on microbes and activates the lectin pathway of the complement system. May also activate monocytes through a G protein-coupled receptor, FFAR2, inducing the secretion of interleukin-8. It also binds preferentially to 9-O-acetylated 2-6-linked sialic acid derivatives and to various glycans containing sialic acid engaged in a 2-3 linkage. FCN1 also forms a trimer which directly interacts with CRP protein, may regulate monocytes activities in vivo.

Full-length mature form of human FCN1 cDNA (30 – 326aa, derived from BC020635) 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:** FCN1 ( Ficolin-1; FCNM )  
**Accession Number:** NP\_001994.2  
**Species:** Human  
**Size:** 50µg / Vial  
**Composition:** 0.5mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose, DTT and others.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

### Key References

Vinolo, M.A.R., et al., *SCFAs induce mouse neutrophil chemotaxis through the GPR43 receptor*. PLoS One 6(6):e21205. (2011)



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Zhang J. et al., *Secreted M-ficolin anchors onto monocyte transmembrane G protein-coupled receptor 43 and cross talks with plasma C-reactive protein to mediate immune signaling and regulate host defense.* J. Immunol. 185:6899-6910 (2010)

Okuzaki D, et al., *FCN1 (M-ficolin), which directly associates with immunoglobulin G1, is a molecular target of intravenous immunoglobulin therapy for Kawasaki disease.* Sci Rep 7 (1), 11334 (2017)

## Applications

1. May be used for in vitro FCN1 mediated leukocytes, monocytes and granulocytes activation regulation study using recombinant FCN1 protein either as soluble factor or as coating matrix protein.
2. May be used for FCN1 protein-protein interaction assay.
3. Potential therapeutic protein, which may be used as inflammation modulator (anti-FCN1 antibody) for various disease therapy.
4. As native human FCN1 immunogen for its specific its antibody production.

## Quality Control

Purity: > 93 % by SDS-PAGE.

## Recombinant Human FCN1 Protein Sequence: ( 35.3 kd )

MASMTGGQQMGRGHHHHHENLYFQGGEFADTCPEVKVVGLEGSCLKLTIILRGCPGLPGAPGPKG  
EAGVIGERGERGLPGAPGKAGPVGPKGDRGEKGMERGEKGDAGQSQSCATGPRNCKDLLDRGYFL  
SGWHTIYLPDCRPLTVLCDMDTDGGGWTVFQRRMDGSVDFYRDWAAYKQGFGSQLGEFWLGNDN  
IHALTAQGSSELRVLDLVDFEGNHQFAKYKSFKVADEAEKYKLVLGAFVGGSSAGNSLTGHNNNF  
STKDQDNDVSSSNCAEKFQGAWWYADCHASNLNGLYLMGPHESYANGINWSAAKGYKYSYKVSE  
MKVRPA