



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

**Name of Product:** Recombinant Human EFEMP2 Protein  
**Catalog Number:** hRP-1191  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

A large number of extracellular matrix proteins have been found to contain variations of the epidermal growth factor (EGF) domain and have been implicated in functions as diverse as blood coagulation, activation of complement and determination of cell fate during development. The protein encoded by human EGF-containing fibulin-like extracellular matrix protein 2 (EFEMP2) gene contains four EGF2 domains and six calcium-binding EGF2 domains. This gene is necessary for elastic fiber formation and connective tissue development. Defects in this gene are cause of an autosomal recessive cutis laxa syndrome. Alternatively spliced transcript variants have been identified for this gene.

Full-length mature protein of human EFEMP1 cDNA (26 – 443 aa, derived from BC010456) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is 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:** EFEMP2 (ARCL1B; FBLN4; MBP1; UPH1)  
**Accession Number:** NP\_058634.4  
**Species:** Human  
**Size:** 20 µg / Vial  
**Composition:** 0.2 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



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Jagirdar,R., et al., *Gene expression profile of aquaporin 1 and associated interactors in malignant pleural mesothelioma*. Gene 517 (1), 99-105 (2013)

Al-Hassnan,Z.N., et al., *Recessively inherited severe aortic aneurysm caused by mutated EFEMP2*. Am. J. Cardiol. 109 (11), 1677-1680 (2012)

Acharya,M., et al., *Yeast two-hybrid analysis of a human trabecular meshwork cDNA library identified EFEMP2 as a novel PITX2 interacting protein*. Mol. Vis. 18, 2182-2189 (2012) Muscle Nerve 45 (2), 200-208 (2012)

## Applications

1. May be used for in vitro EFEMP2 protein mediated cancer cell growth regulation study with this protein as either coating matrix protein or as soluble factor.
2. May be used for EFEMP2 protein – protein interaction assay.
3. May be used as enzymatic substrate for various proteases.
4. Potential biomarker protein for diagnosis of malignant pleural mesothelioma..
5. May be used for specific antibody production.

## Quality Control

Purity: > 90% by SDS-PAGE.

## Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGFELSPQDSEEPDSYTECTDGYEWD PDSQHCRDVNEC  
LT IPEACKGEMKCINHYGGYLCLPRSAAVINDLHGEGPPPPVPPAQHPNPCPPGYEPDDQDSCV  
DVDECAQALHDCRPSQDCHNLPGSYQCTCPDGYRKIGPECVDIDECRYRYCQHRCVNLPGSFRC  
QCEPGFQLGPNNRSCVDVNECDMGAPCEQRCFNSYGTFLCRCHQGYELHRDGFSCSDIDECSYS  
SYLCQYRCINEPGRFSCHCPQGYQLLATRLCQDIDECESGAHQCSAQTCVNFHGGYRCVDTNR  
CVEPYIQVSENRCPCASNPLCREQPSSIVHRYMTITSERVSPADVFQIQATSVYPGAYNAFQI  
RAGNSQGDIFYIRQINNVSAMLVLRPVTGPREYVLDLEMVTMNSLMSYRASSVLRLTVFVGAYT  
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