



**LD Biopharma, Inc.**  
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<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human **MPZL2** Protein  
**Catalog Number:** HRP- 3133  
**Manufacturer:** LD Biopharma, Inc. USA

### Introduction

Human Myelin protein zero-like protein 2 (MPZL2) gene encodes a matrix protein, which plays a role in mediating hemophilic cell-cell adhesion. Thymus development depends on a complex series of interactions between thymocytes and the stromal component of the organ. MPZL2 is expressed in thymus epithelium and strongly down-regulated by thymocyte developmental progression. MPZL2 gene is expressed in the thymus and in several epithelial structures early in embryogenesis. It is highly homologous to the myelin protein zero and, in thymus-derived epithelial cell lines, is poorly soluble in nonionic detergents, strongly suggesting an association to the cytoskeleton. Its capacity to mediate cell adhesion through a homophilic interaction and its selective regulation by T cell maturation might imply the participation of MPZL2 in the earliest phases of thymus organogenesis. The protein bears a characteristic V-type domain and two potential N-glycosylation sites in the extracellular domain; a putative serine phosphorylation site for casein kinase 2 is also present in the cytoplasmic tail.

Full-length extracellular domain of human MPZL2 cDNA (27 – 154aa) was constructed with codon optimization gene synthesis and expressed with a human alpha Fetal Protein N-terminal (AFPn) -His-TEV cleavage site Tag (217aa) fusion at its N-terminal 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:** MPZL2 (DFNB111; EVA; EVA1)  
**Accession Number:** NP\_005788  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, DTT, sucrose & others.  
**Storage:** In liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.

### Key References



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Ni Q, et al., *Epithelial V-like antigen 1 promotes hepatocellular carcinoma growth and metastasis via the ERBB-PI3K-AKT pathway*. Cancer Sci. 111 (5), 1500-1513 (2020)

Bademci G, et al., *MPZL2 is a novel gene associated with autosomal recessive nonsyndromic moderate hearing loss*. Hum. Genet. 137 (6-7), 479-486 (2018)

Ramena G, et al., *CLCA2 Interactor EVA1 Is Required for Mammary Epithelial Cell Differentiation*. PLoS ONE 11 (3), e0147489 (2016)

## Applications

1. May be used for in vitro MPZL2 mediated epithelial cell differentiation regulation study using this recombinant MPZL2 protein either as soluble factor or as coating matrix protein.
2. May be used for MPZL2 protein-protein interaction assay.
3. As native human MPZL2 immunogen for specific antibody production.

## Quality Control:

1. Purity: > 90 % by SDS-PAGE.

## Recombinant Human **AFP<sub>n</sub>**-MPZL2 Fusion Protein. ( 38.3 kD )

**MTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQEQEATYKEVSKMVKDALTAIEKPTGDEQ  
SSGCLLENQLPAFLEELCHEKEILEKYGHSDCCSQSEEGRHNCFLAHKKPTPASIPLFQVPEPVT  
SCEAYEEDRETFMNFIFYEIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVT  
KELRESSGGSHHHHHHGSVEIYTSRVLEAVNGTDARLKCTFSSFAPVGDALTVTNFRPLDGGP  
EQFVFYHIDPFQPMSEGRFKDRVSWDGNPERYDASILLWKLQFDDNGTYTCQVKNPPDVGIVG  
EIRLSVVHTVRFSEIHFL**