



**LD Biopharma, Inc.**  
9924 Mesa Rim Road Suite B  
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<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human MGP Protein  
**Catalog Number:** hRP-0539  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

The protein encoded by human matrix Gla protein (MGP) gene is secreted and likely acts as an inhibitor of bone formation. The encoded protein is found in the organic matrix of bone and cartilage, thought to act as an inhibitor of bone formation. Defects in this gene are a cause of Keutel syndrome (KS). Two transcript variants encoding different isoforms have been found for this gene.

Extracellular domain of human MGP cDNA (20 - 96aa) was constructed with codon optimization and with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein was expressed in E. coli as inclusion bodies, refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

**Gene Symbol:** MGP (GIG36; MGLAP; NTI)  
**Accession Number:** NP\_000891.2  
**Species:** Human  
**Size:** 50 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, 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

Yao, Y., et al., *Matrix Gla protein deficiency causes arteriovenous malformations in mice.* J. Clin. Invest. 121 (8), 2993-3004 (2011)



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Ueland,T., et al., *Circulating levels of non-phosphorylated undercarboxylated matrix Gla protein are associated with disease severity in patients with chronic heart failure.* JOURNAL Clin. Sci. 121 (3), 119-127 (2011)

Kusnierz-Cabala,B., et al., *Serum matrix Gla protein concentrations in patients with mild and severe acute pancreatitis.* Clin. Lab. 57 (11-12), 999-1006 (2011)

Hale,J.E., et al., *Carboxyl-terminal proteolytic processing of matrix Gla protein.* J. Biol. Chem. 266 (31), 21145-21149 (1991)

## **Applications**

1. May be used as matrix protein for coating or in cell culture medium for bone formation regulation study in vitro.
2. May be used for in vitro protein-protein interaction mapping.
3. May be used as antigen for specific antibody production.

## **Quality Control**

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

## **Recombinant Protein Sequence**

MASMTGGQQMGRGHHHHHGNLYFQGGEFYESHESMESYELNPFINRRNANTFISPQQRWRAKV  
QERIRERSKPVHELNREACDDYRLCERYAMVYGYNAAYNRYF