



**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 AMELX Protein  
**Catalog Number:** hRP-1359  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human amelogenin, X isoforms (AMELX) gene encodes a member of the amelogenin family of extracellular matrix proteins. Amelogenins are involved in biomineralization during tooth enamel development. Mutations in this gene cause X-linked amelogenesis imperfecta.

Full-length mature human AMELX cDNA (17–191aa, isoforms-1, derived from BC064379) was constructed with codon optimization and expressed with a human Alpha-Fetal Protein N-terminal domain (AFPn)-His-TEV cleavage site (219aa) 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:** AMELX (AIH1; ALGN; AMG; AMHL; AMGX)  
**Accession Number:** NP\_001133  
**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, 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

Jingchao,H., et al., *Human amelogenin up-regulates osteogenic gene expression in human bone marrow stroma cells*. Biochem. Biophys. Res. Commun. 408 (3), 437-441 (2011)

Zhu,L., et al., *Altered self-assembly and apatite binding of amelogenin induced by N-terminal proline mutation*. Arch. Oral Biol. 56 (4), 331-336 (2011)



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## **Applications**

1. May be used for in vitro AMELX mediated hBMSCx osteogenic differentiation regulation study with this protein as either coating matrix protein or soluble factor.
2. May be used for AMELX protein-protein interaction assay.
3. As antigen for specific antibody production.

## **Quality Control**

Purity: > 90% by SDS-PAGE.

## **Recombinant Protein Sequence**

MTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQEATYKEVSKMVKDALTAIEKPTGDEQ  
SSGCLLENQLPAFLLEELCHEKEILEKYGHSDCCSQSEGRHNCFLAHKKPTPASIPLFQVPEPVT  
SCEAYEEDRETFMKNFIYEIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVT  
KELRESSGGSHHHHHHGSENLYFQGEFEMPLPPHPGHPGYINFSEVLTPLKQWYQSIRPPYPSY  
GYEPMGGWLHHQIIPVLSQQHPPTHTLQPHHHIPVVPAQQPVIPQQPMPVPGQHSMTPIQHHQ  
PNLPPPAQQPYQPQPVPQPQPHQPMQPQPVPVHPMQPLPPQPPLPPMFPMQPLPPMLPDLTLEAWP  
STDKTKREEVD