



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

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human STC2 Protein  
**Catalog Number:** hRP-0737  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human stanniocalcin-2 (STC2) gene encodes a secreted, homodimeric glycoprotein that is expressed in a wide variety of tissues and may have autocrine or paracrine functions. The encoded protein has 10 of its 15 cysteine residues conserved among stanniocalcin family members and is phosphorylated by casein kinase 2 exclusively on its serine residues. Its C-terminus contains a cluster of histidine residues which may interact with metal ions. The protein may play a role in the regulation of renal and intestinal calcium and phosphate transport, cell metabolism, or cellular calcium / phosphate homeostasis. Constitutive overexpression of human stanniocalcin 2 in mice resulted in pre- and postnatal growth restriction, reduced bone and skeletal muscle growth, and organomegaly. Expression of this gene is induced by estrogen and altered in some breast cancers.

Full-length human STC2 (24-302 aa) gene was constructed with 15 N-terminal T7 tag and expressed in E.coli as inclusion bodies, refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

**Gene Symbol:** STC2 ( STCRP )  
**Accession Number:** NP\_003705  
**Species:** Human  
**Size:** 25 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



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Kita, Y., et al., *STC2: a predictive marker for lymph node metastasis in esophageal squamous-cell carcinoma*. Ann. Surg. Oncol. 18 (1), 261-272 (2011)

Law, A.Y. et al., *Stanniocalcin-2 promotes epithelial-mesenchymal transition and invasiveness in hypoxic human ovarian cancer cells*  
Exp. Cell Res. 316 (20), 3425-3434 (2010)

Yokobori, T., et al., *Clinical significance of stanniocalcin 2 as a prognostic marker in gastric cancer*. Ann. Surg. Oncol. 17 (10), 2601-2607 (2010)

## Applications

1. May be used for in vitro epithelial-mesenchymal transition regulation study with recombinant STC2 protein intracellular delivery methods.
2. May be used as enzymatic substrate protein for Kinase, ubiquitin assay.
3. May be used for mapping STC2 protein binding partner in protein-protein interaction assay in B cells.
4. May be used as antigen for specific antibody development for cancer diagnosis.

## Quality Control

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

## Recombinant Protein Sequence

MASMTGGQQMGRGEFTDATNPPEGPQDRSSQQKGRSLQNTAEIQHCLVNAGDVGCGVFECFEN  
NSCEIRGLHGICMTFLHNAGKFDAQGKSFIKDALCKKAHALRHRFGCISRKCPAIREMVSQLQR  
ECYLKHDLCAAAQENTRVIVEMIHFKDLLLHEPYVDLVNLLLTCGEEVKEAITHSVQVQCEQNW  
GSLCSILSFCTSAIQKPPTAPPERQPQVDRTKLSRAHHGEAGHHLPEPSSRETGRGAKGERGSK  
SHPNAHARGRVGGLGAQGPSGSSEWEDEQSEYSDIRR