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**Product Data Sheet**


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Product Name: STC 2 Human  
 Cat. No.: GP21309  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	HEK 293 cell line (Human embryonic kidney).
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Stanniocalcin-2; STC; STC2; STCRP; STC-2; Stanniocalcin-related protein; STC-related protein.		
Amino Acid Sequence	TDATNPPEGP QDRSSQQKGR LSLQNTAEIQ HCLVNAGDVG CGVFECFENN SCEIRGLHGI CMTFLHNAGKFDAQGKSFIL DALKCKAHAL RHRFGCISRK CPAIREMVSQ LQRECYLKHD LCAAQENTR VIVEMIHFKDLLLHEPYVDL VNLLTCGEE VKEAITHSVQ VQCEQNWGSL CSILSFCTSA IQKPPTAPPE RQPQVDRTKLSRAHHGEAGH HLPEPSSRET GRGAKGERGS KSHPNAHARG RVGGLGAQGP SGSSEWEDEQ SEYSDIRRAADYKDDDDK.		
Solubility	Add deionized water to a working concentration approximately 0.5 mg/ml and let the lyophilized pellet dissolve completely. Product is not sterile! Please filter the product by appropriate sterile filter before using it in the cell culture.		
Formulation	Filtered (0.4µm) and lyophilized in 0.5mg/ml in 20mM Tris buffer, 20mM NaCl, pH 7.5.		

**Introduction**

STC2 is a 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 over expression of human stanniocalcin 2 in mice resulted in pre- and postnatal growth

**Caution: Product has not been fully validated for medical applications. For research use only.**

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restriction, reduced bone and skeletal muscle growth, and organomegaly. Expression of this gene is induced by estrogen and altered in some breast cancers.

### Stability

Lyophilized STC-2 although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution Stanniocalcin should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

Stanniocalcin-2 Human Recombinant produced in HEK 293 cell line is a single, glycosylated, polypeptide chain containing 289 amino acids and having a total molecular mass of 31.9kDa (calculated). The Stanniocalcin contains four extra residues which were used as a spacer and 8 residues form the C-Terminal Flag- tag. Stanniocalcin is purified by proprietary chromatographic techniques. The amino acid sequence of the recombinant human Stanniocalcin-2 is 100% homologous to the amino acid sequence AA 25-302 of the human mature Human Stanniocalcin-2.

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