

Recombinant Human Stanniocalcin 2, Flag-tagged

Cat. No. STC2-142H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Stanniocalcin-2 produced in 293 cell line was a single, glycosylated, polypeptide chain containing 289 amino acids and having a total molecular mass of 32 kDa. 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.
Species	Human
Source	HEK293
Description	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 restriction, reduced bone and skeletal muscle growth, and organomegaly. Expression of this gene is induced by estrogen and altered in some breast cancers.
Amino acid sequence	TDATNPPEGP QDRSSQKGR LSLQNTAEIQ HCLVNAGDVG CGVFECFENN

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SCEIRGLHGI CMTFLHNAGKFDAQGKSFik DALKCKAHAL RHRFGCISRK
CPAIREMVSQ LQRECYLKHD LCAAQENTR VIVEMIHFKDLLLHEPYVDL
VNLLLTGEE VKEAITHSVQ VQCEQNWGSL CSILSFCTSA IQKPPTAPPE
RQPQVDRTKLSRAHHGEAGH HLPEPSSRET GRGAKGERGS KSHPNHARG
RVGGLGAQGP SGSSEWEDEQ SEYSDIRRAADYKDDDDK

Physical Appearance	White lyophilized (freeze-dried) powder.
Formulation	Filtered (0.4µm) and lyophilized in 0.5 mg/ml in 20mM Tris buffer, 20mM NaCl, pH 7.5.
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.
Purity	Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Stability	Lyophilized STC-2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Stanniocalcin should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	STC2 stanniocalcin 2 [Homo sapiens]
Synonyms	STC2; stanniocalcin 2; STC-2; STCRP; STC-related protein; stanniocalcin-related protein; Stanniocalcin-2; Stanniocalcin-related protein
Gene ID	8614

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mRNA Refseq	NM_003714
Protein Refseq	NP_003705
MIM	603665
UniProt ID	O76061
Chromosome Location	5q35.2
Function	hormone activity

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