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STC 1 Human

Stanniocalcin-1 Human Recombinant
HRM0107

Product Overview

Name	STC 1 Human
Description	
Stanniocalcin-1 Human Recombinant	
Accession (Primary)	P52823
Synonyms	
Stanniocalcin-1, STC, STC-1.	
Introduction	
Stanniocalcin 1 (STC1) is the mammalian homologue of STC, which was originally identified as a calcium/phosphate-regulating hormone in bony fishes. In contrast, STC1 may play an autocrine and paracrine role with pleiotropic effects in mammals. It is expressed in a wide variety of tissues, but unexpectedly is not detected in the circulation under normal circumstances, which is possibly caused by its attaching to soluble and tethered forms of a high-affinity binding protein. STC-1 can affect calcium homeostasis, bone and muscle mass and structure, and angiogenesis through effects on osteoblasts, osteoclasts, myoblasts/myocytes, and endothelial cells in mouse model. Differential regulation of myocardial STC1 protein expression was reported in heart failure. In addition, STC1 may regulate calcium currents in cardiomyocytes and may contribute to the alterations in calcium homeostasis of the failing heart. STC1 was found to be a selective modulator of hepatocyte growth factor (HGF)-induced endothelial migration and morphogenesis, an inhibitor of macrophage chemotaxis and chemokinesis, suppressor of progesterone and luteinization inhibitor. Together with STC-2, it may play important roles in the processes of implantation and decidualization in the rat. In terminally differentiated adipocytes, it may function as a "survival factor", which contributes to the maintenance of the integrity of mature adipose tissue. In context with its possible role in gestation, a Big STC, a three highermolecular-mass variant has been described. STC1 was identified as one of hypoxia-responsive genes coupled to hypoxia-driven angiogenesis. Current research indicates that STC-1 might be a useful molecular marker to detect tumor cells in blood and bone marrow from patients with various types of malignancies.	
Source	
293 cell line (Human embryonic kidney).	
Physical Appearance	
White lyophilized (freeze-dried) powder.	
Formulation	

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Filtered (0.4 µm) and lyophilized in 0.5mg/ml in 20mM Tris buffer, 50mM NaCl, pH 7.5.

Stability

Lyophilized STC-1 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.

Purity

Greater than 95.0% as determined by SDS-PAGE.

Amino acid sequence

THEAEQNDSV SPRKSRVAAQ NSAEVVRCLN SALQVGCGAF ACLENSTCDT DGMYDICKSF LYSAAKFDTQ GKAFVKESLK CIANGVTSKV FLAIRRCSTF QRMIAEVQEE CYSKLNVCSI AKRNPEAITE VVQLPNHFSN RYYNRLVRSL LECDEDTVST IRDSLMEKIG PNMASLFHIL QTDHCAQTHP RADFNRRRTN EPQKLKVLLR NLRGEEDSPS HIKRTSHESA ASDYKDDDDK .

Solubility

Add deionized water to a working concentration approximately 0.5mg/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.

Precautions

STC 1 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P52823)