

32-6628: STC1 Mouse(Discontinued)

Alternative Name : Stanniocalcin-1, STC, STC-1.

Description

Source: HEK293

Filtered White lyophilized (freeze-dried) powder.

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 plays 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 higher-molecular-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.

STC1 Mouse Recombinant is a single, glycosylated polypeptide chain containing 235 amino acids (19-247a.a) and having a molecular mass of 26.6kDa (calculated). STC1 is fused to a 6 a.a His tag at C-terminal.

Product Info

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| Amount : | 2 µg / 10 µg |
| Purification : | Greater than 90.0% as determined by SDS-PAGE. STC1 filtered (0.4 µm) and lyophilized from 0.5mg/ml in 20 mM Tris buffer and 50 mM NaCl, pH 7.5. |
| Content : | It is recommended to add deionized water to prepare a working stock solution of approximately 0.5mg/ml and let the lyophilized pellet dissolve completely. |
| Storage condition : | Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C. |
| Amino Acid : | HEAEQNDSVS PRKSRVAAQN SAEVVRCLNS ALQVGC GAFA CLENSTCDTD GMYDICKSFL YSAAKFDTQG KAFVKESLKC IANGITSKVF LAIRRCSTFQ RMIAEVQEDC YSKLNVCSIA KRNPEAITEV IQLPNHFSNR YYNRLVRSLL ECDEDTVSTI RDSLMEKIGP NMASLFHILQTDHCAQTHPR ADFNRRRTNE PQKLKVLRLN LRGE GDSPSH IKRTSQESAH HHHHH |