

STC1 (S-17): sc-23270

BACKGROUND

Stanniocalcin 1 (STC1) and stanniocalcin 2 (STC2) are mammalian peptide hormones that were previously considered to be present only in bony fish where they are involved in calcium homeostasis. STC1 plays a role in calcium and phosphate homeostasis and is phosphorylated *in vitro* by protein kinase C, and STC2 is phosphorylated *in vitro* by casein kinase II (CK2). A human fibrosarcoma cell line, HT1080, expresses both STC1 and STC2 as secreted phosphoproteins *in vivo*, with STC2 being phosphorylated by an ecto-CK2-like enzyme. STC1 and STC2 have opposite effects on calcium and phosphate homeostasis, namely anti-hypercalcemic and anti-hypocalcemic actions, respectively. STC1 and STC2 are detected in human adrenal tumors, such as pheochromocytoma, differentiated neuroblastoma aldosterone-producing adenoma, and in cultured adrenal tumor cells (rat pheochromocytoma PC-12 cells and human neuroblastoma NB-1 cells).

REFERENCES

1. Chang, A.C., et al. 1998. Identification of a second stanniocalcin cDNA in mouse and human: stanniocalcin 2. *Mol. Cell Endocrinol.* 141: 95-99.
2. Honda, S., et al. 1999. Regulation by 1 α ,25-dihydroxyvitamin D(3) of expression of stanniocalcin messages in the rat kidney and ovary. *FEBS Lett.* 459: 119-122.
3. Jellinek, D.A., et al. 2000. Stanniocalcin 1 and 2 are secreted as phosphoproteins from human fibrosarcoma cells. *Biochem. J.* 350: 453-461.
4. Miura, W., et al. 2000. Expression of stanniocalcin in zona glomerulosa and medulla of normal human adrenal glands, and some adrenal tumors and cell lines. *APMIS* 108: 367-372.
5. Stasko, S.E., et al. 2001. Stanniocalcin gene expression during mouse urogenital development: a possible role in mesenchymal-epithelial signalling. *Dev. Dyn.* 220: 49-59.

CHROMOSOMAL LOCATION

Genetic locus: STC1 (human) mapping to 8p21.2; Stc1 (mouse) mapping to 14 D2.

SOURCE

STC1 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of STC1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23270 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

STC1 (S-17) is recommended for detection of precursor and mature chain of STC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

STC1 (S-17) is also recommended for detection of precursor and mature chain of STC1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for STC1 siRNA (h): sc-44126, STC1 siRNA (m): sc-44871, STC1 siRNA (r): sc-156069, STC1 shRNA Plasmid (h): sc-44126-SH, STC1 shRNA Plasmid (m): sc-44871-SH, STC1 shRNA Plasmid (r): sc-156069-SH, STC1 shRNA (h) Lentiviral Particles: sc-44126-V, STC1 shRNA (m) Lentiviral Particles: sc-44871-V and STC1 shRNA (r) Lentiviral Particles: sc-156069-V.

Molecular Weight of STC1: 31 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


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Try **STC1 (1A3): sc-293435**, our highly recommended monoclonal alternative to STC1 (S-17).