

STC2 (N-18): sc-14350

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).

CHROMOSOMAL LOCATION

Genetic locus: STC2 (human) mapping to 5q35.1; Stc2 (mouse) mapping to 11 A4.

SOURCE

STC2 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of STC2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-14350 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

STC2 (N-18) is recommended for detection of STC2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

STC2 (N-18) is also recommended for detection of STC2 in additional species, including canine and bovine.

Suitable for use as control antibody for STC2 siRNA (h): sc-44127, STC2 siRNA (m): sc-153883, STC2 shRNA Plasmid (h): sc-44127-SH, STC2 shRNA Plasmid (m): sc-153883-SH, STC2 shRNA (h) Lentiviral Particles: sc-44127-V and STC2 shRNA (m) Lentiviral Particles: sc-153883-V.

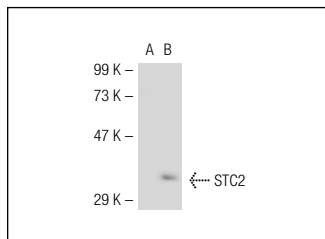
Molecular Weight of STC2: 33 kDa.

Positive Controls: STC2 (m): 293T Lysate: sc-126057.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



STC2 (N-18): sc-14350. Western blot analysis of STC2 expression in non-transfected: sc-117752 (A) and mouse STC2 transfected: sc-126057 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Xiao, L.J., et al. 2006. Expression and regulation of stanniocalcin 1 and 2 in rat uterus during embryo implantation and decidualization. *Reproduction* 131: 1137-1149.
- O'Neill, J.P., et al. 2006. Thapsigargin resistance in human prostate cancer cells. *Cancer* 107: 649-659.

STORAGE

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

PROTOCOLS

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



Try **STC2 (2B11): sc-293388**, our highly recommended monoclonal alternative to STC2 (N-18).