

STC1 (N-15): sc-14346

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 LOCATIONS

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

SOURCE

STC1 (N-15) 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 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14346 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

STC1 (N-15) is recommended for detection of STC1 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). STC1 (N-15) is also recommended for detection 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.

Positive Controls: rat skeletal muscle extract: sc-364810 or mouse small intestine extract: sc-364252.

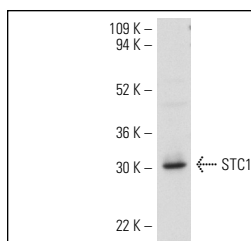
STORAGE

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

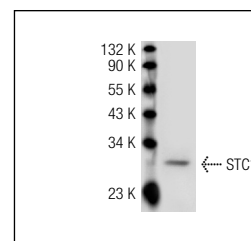
RESEARCH USE

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

DATA



STC1 (N-15): sc-14346. Western blot analysis of STC1 expression in rat skeletal muscle tissue extract.



STC1 (N-15): sc-14346. Western blot analysis of STC1 expression in mouse intestine tissue extract.

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.
- Li, K., et al. 2008. Identification of STC1 as an β -amyloid activated gene in human brain microvascular endothelial cells using cDNA microarray. *Biochem. Biophys. Res. Commun.* 376: 399-403.
- De Martino, I., et al. 2009. Regulation of microRNA expression by HMGA1 proteins. *Oncogene* 28: 1432-1442.
- Liu, G., et al. 2010. Stanniocalcin 1 and ovarian tumorigenesis. *J. Natl. Cancer Inst.* 102: 812-827.
- Shirakawa, M., et al. 2012. Assessment of stanniocalcin-1 as a prognostic marker in human esophageal squamous cell carcinoma. *Oncol. Rep.* 27: 940-946.
- Lambert, C., et al. 2014. Gene expression pattern of cells from inflamed and normal areas of osteoarthritis synovial membrane. *Arthritis Rheumatol.* 66: 960-968.

PROTOCOLS

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