

SP (P-19): sc-23558

BACKGROUND

Trefoil peptides are protease resistant molecules secreted throughout the gut that play a role in mucosal healing and protection of the gastrointestinal epithelia. These peptides contain three intrachain disulfide bonds, forming the trefoil motif, or P-domain. SP (spasmolytic polypeptide), also designated Trefoil factor 2 (TFF2) precursor, is a trefoil protein that functions to inhibit gastrointestinal motility and gastric acid secretion. SP may also act as a structural component of the gastric mucus, possibly by stabilizing glycoproteins in the mucus gel through interactions with carbohydrate side chains. A down-regulation of SP expression is associated with primary gastric cancer, and a progressive loss of this protein is likely to be involved in the early stage of the multi-step gastric carcinogenesis pathway.

REFERENCES

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2. May, F.E., et al. 1997. Trefoil proteins: their role in normal and malignant cells. *J. Pathol.* 183: 4-7.
3. Poulsom, R., et al. 1997. Intestinal trefoil factor (TFF 3) and pS2 (TFF 1), but not spasmolytic polypeptide (TFF 2) mRNAs are co-expressed in normal, hyperplastic, and neoplastic human breast epithelium. *J. Pathol.* 183: 30-38.
4. Murphy, M.S. 1998. Growth factors and the gastrointestinal tract. *Nutrition* 14: 771-774.
5. Ribieras, S., et al. 1998. The pS2/TFF1 trefoil factor, from basic research to clinical applications. *Biochim. Biophys. Acta* 19: F61-F77.
6. Kirikoshi, H. et al. 2002. Expression of TFF1, TFF2 and TFF3 in gastric cancer. *Int. J. Oncol.* 21: 655-659.
7. Leung, W.K., et al. 2002. Expression of trefoil peptides (TFF1, TFF2, and TFF3) in gastric carcinomas, intestinal metaplasia, and non-neoplastic gastric tissues. *J. Pathol.* 197: 582-588.
8. Rodrigues, S., et al. 2003. Selective abrogation of the proinvasive activity of the trefoil peptides pS2 and spasmolytic polypeptide by disruption of the EGF receptor signaling pathways in kidney and colonic cancer cells. *Oncogene* 22: 4488-4497.

CHROMOSOMAL LOCATION

Genetic locus: TFF2 (human) mapping to 21q22.3; Tff2 (mouse) mapping to 17 A3.3.

SOURCE

SP (P-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SP 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-23558 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SP (P-19) is recommended for detection of SP of human and, to a lesser extent, mouse 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).

Suitable for use as control antibody for SP siRNA (h): sc-91462, SP siRNA (m): sc-153688, SP shRNA Plasmid (h): sc-91462-SH, SP shRNA Plasmid (m): sc-153688-SH, SP shRNA (h) Lentiviral Particles: sc-91462-V and SP shRNA (m) Lentiviral Particles: sc-153688-V.

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.

SELECT PRODUCT CITATIONS

1. Paunel-Görgülü, A.N., et al. 2011. Trefoil factor family peptide 2 acts proliferative and pro-apoptotic in the murine retina. *Histochem. Cell Biol.* 135: 461-473.

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.

PROTOCOLS

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



Try **SP (4G7C3): sc-517213**, our highly recommended monoclonal alternative to SP (P-19).