

# ITF (15C6): sc-81467

## BACKGROUND

Trefoil peptides are protease resistant molecules secreted throughout the gut that play a role in mucosal healing. Trefoil peptides contain three intrachain disulfide bonds, forming the trefoil motif, or P-domain. ITF (intestinal trefoil factor) is expressed in the epithelial mucosal layer of the small intestine and colon, brain and pituitary. SP (also known as pancreatic trefoil factor 2 or pancreatic spasmodic polypeptide) is an inhibitor of spasmodic activity and gastric acid secretion. Human SP is expressed exclusively in normal stomach epithelium and unlike pS2, it is not expressed in breast carcinoma. Both SP and ITF are predominantly found in gastrointestinal tissues, and are upregulated around areas of epithelial damage and in meta- and neoplasia. The genes which encode pS2, SP and ITF are clustered in human chromosome 21q22.3.

## REFERENCES

- Tomasetto, C., et al. 1990. hSP, the domain-duplicated homolog of pS2 protein, is co-expressed with pS2 in stomach but not in breast carcinoma. *EMBO J.* 9: 407-414.
- Podolsky, D.K., et al. 1993. Identification of human intestinal trefoil factor. Goblet cell-specific expression of a peptide targeted for apical secretion. *J. Biol. Chem.* 268: 6694-6702.
- Gott, P., et al. 1996. Human trefoil peptides: genomic structure in 21q22.3 and coordinated expression. *Eur. J. Hum. Genet.* 4: 308-315.
- Probst, J.C., et al. 1996. Human intestinal trefoil factor is expressed in human hypothalamus and pituitary: evidence for a novel neuropeptide. *FASEB J.* 10: 1518-1523.
- Thim, L. 1997. Trefoil peptides: from structure to function. *Cell. Mol. Life Sci.* 53: 888-903.
- Murphy, M.S. 1998. Growth factors and the gastrointestinal tract. *Nutrition* 14: 771-774.
- LocusLink Report (LocusID: 182590). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: TFF3 (human) mapping to 21q22.3.

## SOURCE

ITF (15C6) is a mouse monoclonal antibody raised against amino acids 1-12 corresponding to the N-terminus of ITF of human origin.

## PRODUCT

Each vial contains 50 µg IgG<sub>1</sub> in 0.5 ml PBS with < 0.1% sodium azide, 1% gelatin, PEG and sucrose.

## 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.

## APPLICATIONS

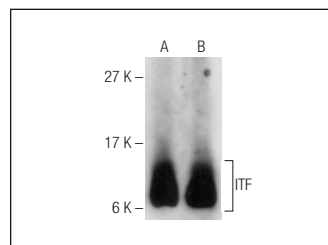
ITF (15C6) is recommended for detection of ITF of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for ITF siRNA (h): sc-39813, ITF shRNA Plasmid (h): sc-39813-SH and ITF shRNA (h) Lentiviral Particles: sc-39813-V.

Molecular Weight of ITF: 9 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, human small intestine extract: sc-364225 or human colon extract: sc-363757.

## DATA



ITF (15C6): sc-81467. Western blot analysis of ITF expression in human colon (A) and human small intestine (B) tissue extracts.

## SELECT PRODUCT CITATIONS

- Radtke, A.L., et al. 2010. Analysis of interactions of *Salmonella* type three secretion mutants with 3-D intestinal epithelial cells. *PLoS ONE* 5: e15750.
- Qu, Y., et al. 2012. Increased trefoil factor 3 levels in the serum of patients with three major histological subtypes of lung cancer. *Oncol. Rep.* 27: 1277-1283.
- Meng, J.R., et al. 2013. TFF3 and survivin expressions associate with a lower survival rate in gastric cancer. *Clin. Exp. Med.* 13: 297-303.
- Wang, X.N., et al. 2015. Trefoil factor 3 as a novel biomarker to distinguish between adenocarcinoma and squamous cell carcinoma. *Medicine* 94: e860.
- Lin, X., et al. 2018. TFF3 contributes to epithelial-mesenchymal transition (EMT) in papillary thyroid carcinoma cells via the MAPK/ERK signaling pathway. *J. Cancer* 9: 4430-4439.
- Graziani, F., et al. 2019. Deoxynivalenol inhibits the expression of trefoil factors (TFF) by intestinal human and porcine goblet cells. *Arch. Toxicol.* 93: 1039-1049.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.