

pS2 (A-8): sc-390889



The Power to Question

BACKGROUND

Trefoil peptides are protease resistant molecules secreted throughout the gut that play a role in mucosal healing. These peptides contain three intrachain disulfide bonds, forming the trefoil motif, or P-domain. pS2, also designated Md2, BCE1, TFF1 and pNR-2, is a trefoil protein that is highly expressed in normal gastric mucosa. pS2 has also been detected in a number of carcinomas including cancers of the breast, pancreas and stomach. pS2 is not present in normal breast tissue but is inducible by estrogen in MCF7 cells. pS2 is known to form dimers and this dimerization is thought to play a role in its protective and healing properties. The gene encoding pS2 maps to human chromosome 21q22.3.

REFERENCES

- Pichon, M.F., et al. 1993. Clinical significance of the estrogen regulated pS2 protein in mammary tumors. *Crit. Rev. Oncol. Hematol.* 15: 13-21.
- Gott, P., et al. 1996. Human trefoil peptides: genomic structure in 21q22.3 and coordinated expression. *Eur. J. Hum. Genet.* 4: 308-315.
- Thim, L. 1997. Trefoil peptides: from structure to function. *Cell. Mol. Life Sci.* 53: 888-903.
- May, F.E., et al. 1997. Trefoil proteins: their role in normal and malignant cells. *J. Pathol.* 183: 4-7.
- Poulsom, R., et al. 1997. Intestinal trefoil factor (TFF 3) and pS2 (TFF 1), but not spasmodic polypeptide (TFF 2) mRNAs are co-expressed in normal, hyperplastic, and neoplastic human breast epithelium. *J. Pathol.* 183: 30-38.
- Murphy, M.S. 1998. Growth factors and the gastrointestinal tract. *Nutrition* 14: 771-774.
- Ribieras, S., et al. 1998. The pS2/TFF1 trefoil factor, from basic research to clinical applications. *Biochim. Biophys. Acta* 19: F61-F77.
- Marchbank, T., et al. 1998. Dimerization of human pS2 (TFF1) plays a key role in its protective/healing effects. *J. Pathol.* 185: 153-158.
- Giamarchi, C., et al. 2002. Two antiestrogens affect differently chromatin remodeling of trefoil factor 1 (pS2) gene and the fate of estrogen receptor in MCF7 cells. *Biochim. Biophys. Acta* 1578: 12-20.

CHROMOSOMAL LOCATION

Genetic locus: TFF1/TFF2/TFF3 (human) mapping to 21q22.3.

SOURCE

pS2 (A-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 56-81 at the C-terminus of pS2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390889 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

pS2 (A-8) is recommended for detection of precursor and mature pS2, SP and ITF of human origin by Western Blotting (starting dilution 1:100, 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).

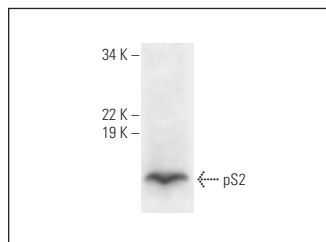
Molecular Weight of pS2: 7-12 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



pS2 (A-8): sc-390889. Western blot analysis of pS2 expression in MCF7 whole cell lysate.

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 for detailed protocols and support products.