



Mucin 12 (N-13): sc-26370

BACKGROUND

Membrane-associated and secretory mucins are high molecular weight glycoproteins of the glycocalyx (polysaccharide biofilm) that protects mucosal epithelium from particulate matter and microorganisms. The mucin gene family includes MUC1, MUC2, MUC3A, MUC3B, MUC4, MUC5AC, MUC5B, MUC6, MUC7, MUC8, MUC9, MUC11 and MUC12, of these a family of four related genes (MUC2, MUC5AC, MUC5B and MUC6) encode the major secreted mucins. Mucin 12 protein contains a predicted transmembrane domain, 2 extracellular cysteine-rich EGF-like domains, a coiled-coil region, and a domain consisting of serine-, threonine-, and proline-rich degenerate tandem repeats of 28 amino acids; a structural feature typical of mucins. Mucin 12 transcript (>12 kb) is present in colon, pancreas, prostate, and uterus. Colorectal tumors can have low Mucin 12 transcript levels in comparison to normal colon tissues.

REFERENCES

- Owen, D.A. and Reid, P.E. 1995. Histochemical alterations of mucin in normal colon, inflammatory bowel disease and colonic adenocarcinoma. *Histochem. J.* 27: 882-889.
- Gratchev, A., Bohm, C., Riede, E., Foss, H.D., Hummel, M., Mann, B., Backert, S., Buhr, H.J., Stein, H., Riecken, E.O. and Hanski, C. 1998. Regulation of mucin MUC2 gene expression during colon carcinogenesis. *Ann. N.Y. Acad. Sci.* 859: 180-183.
- Williams, S.J., McGuckin, M.A., Gotley, D.C., Eyre, H.J., Sutherland, G.R. and Antalis, T.M. 1999. Two novel mucin genes down-regulated in colorectal cancer identified by differential display. *Cancer Res.* 59: 4083-4089.
- Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604609. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- LocusLink Report (LocusID: 10071). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: MUC12 (human) mapping to 7q22.1.

SOURCE

Mucin 12 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Mucin 12 of human origin.

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.

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-26370 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mucin 12 (N-13) is recommended for detection of Mucin 12 of human 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).

Molecular Weight of Mucin 12: 64 kDa.

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.