

# Mucin 12 (H-300): sc-66970

## 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 family consists of Mucins 1-4, Mucin 5 (AC and B), Mucins 6-8, Mucins 11-13 and Mucins 15-17. A family of four related Mucin genes (MUC2, MUC5AC, MUC5B and MUC6) encode the major secreted mucins. Mucin 12 contains a predicted transmembrane domain; two 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 downregulated in colorectal cancer identified by differential display. *Cancer Res.* 59: 4083-4089.
- Online Mendelian Inheritance in Man, OMIM™. Johns Hopkins University, Baltimore, MD. MIM Number: 604609: 02/28/2000: 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.

## SOURCE

Mucin 12 (H-300) is a rabbit polyclonal antibody raised against amino acids 61-360 mapping near the N-terminus of Mucin 12 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.

## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

Mucin 12 (H-300) is recommended for detection of Mucin 12 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Mucin 12 siRNA (h): sc-45683, Mucin 12 shRNA Plasmid (h): sc-45683-SH and Mucin 12 shRNA (h) Lentiviral Particles: sc-45683-V.

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 goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

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


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Try **Mucin 12 (B-9): sc-377269** or **Mucin 12 (G-1): sc-377268**, our highly recommended monoclonal alternatives to Mucin 12 (H-300).