

# Mucin 5B (I-12): sc-135508

## BACKGROUND

Mucins are a group of high molecular weight glycoproteins consisting of a mucin core protein and O-linked carbohydrates. The Mucin 5B gene, which contains a 3' *cis*-element, is one of the four mucin genes mapped to human chromosome 11p15. Although Mucin 5B is the prominent human gallbladder mucin, it is also expressed and secreted in the colon. In addition, Mucin 5B is expressed in non-inflamed middle ears and normal esophagus, and is upregulated by chronic inflammation and highly secreted in the diseased middle ear. Mucin 5B is abnormally expressed in gastric carcinomatous tissues. Its expression in gastric cancer cells is controlled by a highly active distal promoter, which is upregulated by protein kinase C and repressed under the influence of methylation. Mucous differentiation and expression of Mucin 5B is retinoic acid- (RA) or retinol-dependent. RA control of mucin gene is mediated by the retinoic acid receptor RAR $\alpha$  and, to a lesser extent, by RAR $\gamma$ . The correlation of mucin protein levels in human cervical mucous with the peak at midcycle suggests that mucin may be important in sperm transit to the uterus.

## REFERENCES

1. Pigny, P., et al. 1996. Identification of a 42-kDa nuclear factor (NF-1-MUC5B) from HT-29 MTX cells that binds to the 3' region of human mucin gene MUC5B. *Biochem. Biophys. Res. Commun.* 220: 186-191.
2. van Klinken, B.J., et al. 1998. MUC5B is the prominent mucin in human gallbladder and is also expressed in a subset of colonic goblet cells. *Am. J. Physiol.* 274: 871-878.
3. Kashiwagi, H., et al. 2001. MUC1 and MUC2 expression in human gallbladder carcinoma: A clinicopathological study and relationship with prognosis. *Oncol. Rep.* 8: 485-489.
4. Lin, J., et al. 2001. Characterization of mucins in human middle ear and eustachian tube. *Am. J. Physiol. Lung Cell Mol. Physiol.* 280: 1157-1167.
5. Smirnova, M.G., et al. 2001. Up-regulation of mucin secretion in HT29-MTX cells by the pro-inflammatory cytokines tumor necrosis factor- $\alpha$  and interleukin-6. *Eur. Cytokine Netw.* 12: 119-125.

## CHROMOSOMAL LOCATION

Genetic locus: Muc5b (mouse) mapping to 7 F5.

## SOURCE

Mucin 5B (I-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Mucin 5B of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-135508 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

Mucin 5B (I-12) is recommended for detection of Mucin 5B of mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Mucin family members.

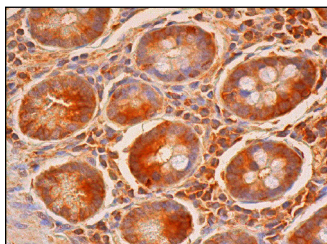
Suitable for use as control antibody for Mucin 5B siRNA (m): sc-149704, Mucin 5B shRNA Plasmid (m): sc-149704-SH and Mucin 5B shRNA (m) Lentiviral Particles: sc-149704-V.

Molecular Weight of Mucin 5B: 600 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Mucin 5B (I-12): sc-135508. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells and endothelial cells.

## STORAGE

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



Try **Mucin 5B (5B#19-2E): sc-21768**, our highly recommended monoclonal alternative to Mucin 5B (I-12).