

# Mucin 13 (M-20): sc-46405

## BACKGROUND

Mucins are epithelial glycoproteins with a high content of clustered oligosaccharides that are O-glycoside-linked to tandem repeat peptides rich in threonine, serine and proline. Mucin 13 (MUC13), also designated downregulated in colon cancer 1 (DRCC1), is an epithelial and hemopoietic type I membrane protein that undergoes secretion and influences gastrointestinal mucosa levels. It is most abundant in epithelial tissues of the gastrointestinal and respiratory tracts, such as large intestine and trachea, followed by kidney, small intestine, appendix and stomach. Mucin 13 is a good differentiation marker for gastrointestinal mucosa and may also indicate certain gastric tumors. It localizes to the apical membrane of both columnar and goblet cells in the gastrointestinal tract, and within goblet cell thecae. Mucin 13 is a cleaved protein and the  $\beta$  subunit, containing the cytoplasmic tail, can homodimerize.

## REFERENCES

- Williams, S.J., et al. 2001. MUC13, a novel human cell surface mucin expressed by epithelial and hemopoietic cells. *J. Biol. Chem.* 276: 18327-18336.
- Corrales, R.M., et al. 2003. Normal human conjunctival epithelium expresses MUC13, MUC15, MUC16 and MUC17 mucin genes. *Arch. Soc. Esp. Oftalmol.* 78: 375-381.
- Carraway, K.L., et al. 2003. Cell signaling through membrane mucins. *Bioessays* 25: 66-71.
- Packer, L.M., et al. 2004. Expression of the cell surface mucin gene family in adenocarcinomas. *Int. J. Oncol.* 25: 1119-1126.
- Byrd, J.C., et al. 2004. Mucins and mucin-binding proteins in colorectal cancer. *Cancer Metastasis Rev.* 23: 77-99.
- Hollingsworth, M.A., et al. 2004. Mucins in cancer: protection and control of the cell surface. *Nat. Rev. Cancer* 4: 45-60.
- Shimamura, T., et al. 2005. Overexpression of MUC13 is associated with intestinal-type gastric cancer. *Cancer Sci.* 96: 265-273.

## CHROMOSOMAL LOCATION

Genetic locus: Muc13 (mouse) mapping to 16 B3.

## SOURCE

Mucin 13 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of Mucin 13 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-46405 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 13 (M-20) is recommended for detection of Mucin 13 of mouse, rat and, to a lesser extent, canine origin origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 13 siRNA (m): sc-45691, Mucin 13 shRNA Plasmid (m): sc-45691-SH and Mucin 13 shRNA (m) Lentiviral Particles: sc-45691-V.

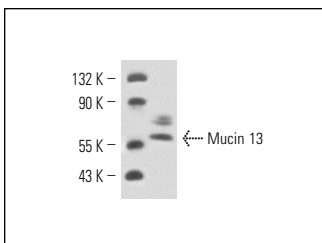
Molecular Weight of Mucin 13: 58 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, mouse spleen extract: sc-2391.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



Mucin 13 (M-20): sc-46405. Western blot analysis of Mucin 13 expression in KNRK 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.



Try **Mucin 13 (G-10): sc-390115**, our highly recommended monoclonal alternative to Mucin 13 (M-20).