

# Mucin 2 (994/152): sc-59956

## BACKGROUND

The mucins are a family of highly glycosylated, secreted proteins with a basic structure consisting of a variable number of tandem repeats (VNTRs) encoded by 60 base pairs (Mucin 1), 69 base pairs (Mucin 2) and 51 base pairs (Mucin 3). The number of repeats is highly polymorphic and varies among different alleles. Mucin 1 proteins are expressed as type I membrane proteins in addition to secreted forms. Mucin 1 is aberrantly expressed in epithelial tumors including breast carcinomas. Mucin 2 coats the epithelia of the intestines and airways and is associated with colonic tumors. Mucin 3 is a major component of various mucus gels and is broadly expressed in normal and tumor cells.

## REFERENCES

1. Siddiqui, J., et al. 1988. Isolation and sequencing of a cDNA coding for the human DF3 breast carcinoma-associated antigen. *Proc. Natl. Acad. Sci. USA* 85: 2320-2323.
2. Lan, M.S., et al. 1990. Cloning and sequencing of a human pancreatic tumor mucin cDNA. *J. Biol. Chem.* 265: 15294-15299.
3. Gum, J.R., Jr., et al. 1990. Molecular cloning of cDNAs derived from a novel human intestinal mucin gene. *Biochem. Biophys. Res. Commun.* 171: 407-415.
4. Gum, J.R., Jr., et al. 1992. The human MUC2 intestinal mucin has cysteine-rich subdomains located both upstream and downstream of its central repetitive region. *J. Biol. Chem.* 267: 21375-21383.

## CHROMOSOMAL LOCATION

Genetic locus: MUC2 (human) mapping to 11p15.5.

## SOURCE

Mucin 2 (994/152) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to the tandem repeat sequence of Mucin 2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Mucin 2 (994/152) is recommended for detection of Mucin 2 of human origin by 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 Muc 1 or 4.

Suitable for use as control antibody for Mucin 2 siRNA (h): sc-43160, Mucin 2 shRNA Plasmid (h): sc-43160-SH and Mucin 2 shRNA (h) Lentiviral Particles: sc-43160-V.

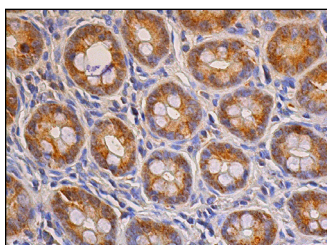
Molecular Weight of Mucin 2 monomer: 300 kDa.

Molecular Weight of Mucin 2 dimer: 600 kDa.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Mucin 2 (994/152): sc-59956. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Limvuttegrijerat, T., et al. 2014. Crude ethanolic extracts of *Zingiber cassumunar* ROXB. inhibit PMA-induced MUC2 and MUC5AC expression via ERK inhibition in human airway epithelial cells. *Asian Pac. J. Allergy Immunol.* 32: 328-336.
2. Poachanukoon, O., et al. 2014. Macrolides attenuate phorbol ester-induced tumor necrosis factor-α and mucin production from human airway epithelial cells. *Pharmacology* 93: 92-99.
3. Poachanukoon, O., et al. 2017. Mometasone furoate suppresses PMA-induced MUC-5AC and MUC-2 production in human airway epithelial cells. *Tuberc. Respir. Dis.* 80: 60-68.

## 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](http://www.scbt.com) for detailed protocols and support products.



See **Mucin 2 (F-2): sc-515032** for Mucin 2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.