

Mucin 3 (SPM200): sc-56571

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

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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 Mucin 2 intestinal mucin has cysteine-rich subdomains located both upstream and downstream of its central repetitive region. *J. Biol. Chem.* 267: 21375-21383.
5. Pandey, P., et al. 1995. Association of the DF3/Mucin 1 breast cancer antigen with GRB2 and the Sos/Ras exchange protein. *Cancer Res.* 55: 4000-4003.
6. Geng, H., et al. 2006. Soluble form of T cell Ig Mucin 3 is an inhibitory molecule in T cell-mediated immune response. *J. Immunol.* 176: 1411-1420.
7. Frisnacho-Kiss, S., et al. 2006. Cutting edge: T cell Ig Mucin 3 reduces inflammatory heart disease by increasing CTLA-4 during innate immunity. *J. Immunol.* 176: 6411-6415.
8. Louis, N.A., et al. 2006. Selective induction of Mucin 3 by hypoxia in intestinal epithelia. *J. Cell. Biochem.* 99: 1616-1627.
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CHROMOSOMAL LOCATION

Genetic locus: MUC3A (human) mapping to 7q22.1.

SOURCE

Mucin 3 (SPM200) is a mouse monoclonal antibody raised against Mucin 3 tandem repeat peptide of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Mucin 3 (SPM200) is recommended for detection of Mucin 3 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with Mucin 1 or 2.

Molecular Weight of Mucin 3: 1100 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® Mounting Medium: sc-24941 or UltraCruz® 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.

SELECT PRODUCT CITATIONS

1. Wiktorowicz, M., et al. 2018. Rationale and feasibility of mucin expression profiling by qRT-PCR as diagnostic biomarkers in cytology specimens of pancreatic cancer. *Pancreatology* 18: 977-982.

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 for detailed protocols and support products.