SANTA CRUZ BIOTECHNOLOGY, INC.

Mucin 2 (H-300): sc-15334

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.

CHROMOSOMAL LOCATION

Genetic locus: MUC2 (human) mapping to 11p15.5; Muc2 (mouse) mapping to 7 F5.

SOURCE

Mucin 2 (H-300) is a rabbit polyclonal antibody raised against amino acids 4880-5179 mapping at the C-terminus of Mucin 2 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.

APPLICATIONS

Mucin 2 (H-300) is recommended for detection of Mucin 2 of mouse, rat and 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).

Suitable for use as control antibody for Mucin 2 siRNA (h): sc-43160, Mucin 2 siRNA (m): sc-155920, Mucin 2 shRNA Plasmid (h): sc-43160-SH, Mucin 2 shRNA Plasmid (m): sc-155920-SH, Mucin 2 shRNA (h) Lentiviral Particles: sc-43160-V and Mucin 2 shRNA (m) Lentiviral Particles: sc-155920-V.

Molecular Weight of Mucin 2 monomer: 300 kDa.

Molecular Weight of Mucin 2 dimer: 600 kDa.

RESEARCH USE

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

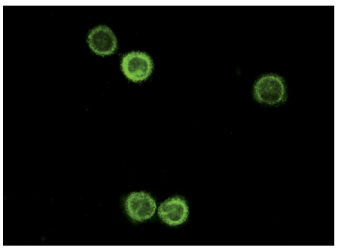
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

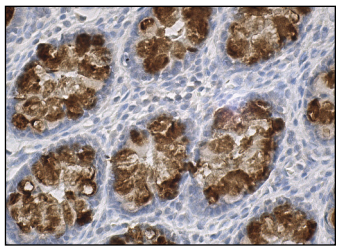
STORAGE

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

DATA



Mucin 2 (H-300): sc-15334. Immunofluorescence staining of methanol-fixed SW480 cells showing cytoplasmic localization.



Mucin 2 (H-300): sc-15334. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Stanger, B., et al. 2005. PTEN constrains centroacinar cell expansion and malignant transformation in the pancreas. Cancer Cell 8: 185-195.
2. Wang, J., et al. 2009. Ubiquitin-editing enzyme A20 promotes tolerance to lipopolysaccharide in enterocytes. J. Immunol. 183: 1384-1392.
3. Sato, T., et al. 2009. Single LGR5 stem cells build crypt-villus structures *in vitro* without a mesenchymal niche. Nature 459: 262-265.
4. Gracz, A.D., et al. 2010. Sox9 expression marks a subset of CD24-expressing small intestine epithelial stem cells that form organoids *in vitro*. Am. J. Physiol. Gastrointest. Liver Physiol. 298: G590-G600.
5. Kawashima, H. 2010. Roles of GlcNAc-6-O-sulfotransferases in lymphoid and nonlymphoid tissues. Meth. Enzymol. 479: 243-256.
6. Coant, N., et al. 2010. NADPH oxidase 1 modulates WNT and NOTCH1 signaling to control the fate of proliferative progenitor cells in the colon. Mol. Cell. Biol. 30: 2636-2650.
7. Gouyer, V., et al. 2010. The characterization of the first anti-mouse Muc6 antibody shows an increased expression of the mucin in pancreatic tissue of Cftr-knockout mice. Histochem. Cell Biol. 133: 517-525.
8. Lee, H.J., et al. 2010. Gene expression profiling of metaplastic lineages identifies CDH17 as a prognostic marker in early stage gastric cancer. Gastroenterology 139: 213-25.e3.
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10. Gerbe, F., et al. 2011. Distinct ATOH1 and Neurog3 requirements define tuft cells as a new secretory cell type in the intestinal epithelium. J. Cell Biol. 192: 767-780.
11. Ramalingam, S., et al. 2012. Distinct levels of Sox9 expression mark colon epithelial stem cells that form colonoids in culture. Am. J. Physiol. Gastrointest. Liver Physiol. 302: G10-G20.