

# Mucin 1 (C-20): sc-6827

## 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

- 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.
- 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: CDC5L (human) mapping to 1q22.

## SOURCE

Mucin 1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Mucin 1 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.

Blocking peptide available for competition studies, sc-6827 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Mucin 1 (C-20) is recommended for detection of Mucin 1 of human and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for Mucin 1 siRNA (h): sc-35985, Mucin 1 shRNA Plasmid (h): sc-35985-SH and Mucin 1 shRNA (h) Lentiviral Particles: sc-35985-V.

Molecular Weight of Mucin 1: 200 kDa.

Positive Controls: BT-20 cell lysate: sc-2223, SCC-4 whole cell lysate: sc-364363 or AT-3 whole cell lysate.

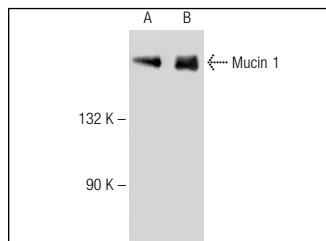
## RESEARCH USE

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

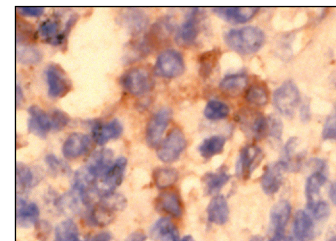
## STORAGE

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

## DATA



Mucin 1 (C-20): sc-6827. Western blot analysis of Mucin 1 expression in BT-20 (A) and SCC-4 (B) whole cell lysates.



Mucin 1 (C-20): sc-6827. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tumor showing membrane localization.

## SELECT PRODUCT CITATIONS

- Telega, G.W., et al. 2000. Uptake and presentation of antigen to T cells by primary clononic epithelial cells in normal and diseased states. *Gastroenterology* 119: 1548-1559.
- Segura, J.A., et al. 2001. Ehrlich ascites tumor cells expressing anti-sense glutaminase mRNA lose their capacity to evade the mouse immune system. *Int. J. Cancer* 91: 379-384.
- Gonzalez-Guerrico, A.M., et al. 2002. Tyrosine kinase c-Src constitutes a bridge between cystic fibrosis transmembrane regulator channel failure and Muc 1 overexpression in cystic fibrosis. *J. Biol. Chem.* 277: 17239-17247.
- Lee, C.G., et al. 2002. Transgenic overexpression of interleukin (IL)-10 in the lung causes mucus metaplasia, tissue inflammation, and airway remodeling via IL-13-dependent and -independent pathways. *J. Biol. Chem.* 277: 35466-35474.
- Alibardi, L., et al. 2003. Presence of putative histidine-rich proteins in the amphibian epidermis. *J. Exp. Zool. A Comp. Exp. Biol.* 297: 105-117.
- Saeki, N., et al. 2011. A functional single nucleotide polymorphism in mucin 1, at chromosome 1q22, determines susceptibility to diffuse-type gastric cancer. *Gastroenterology* 140: 892-902.
- Ozcakir, H.T., et al. 2011. Effect of GnRH antagonist therapy on the expression of MUC-1 and heparin binding growth factor expression in the endometrium of hyperstimulated rats. *Clin. Exp. Obstet. Gynecol.* 38: 76-80.
- Wilsher, S., et al. 2012. Persistence of an immunoreactive MUC1 protein at the fetomaternal interface throughout pregnancy in the mare. *Reprod. Fertil. Dev.* 25: 753-761.

## PROTOCOLS

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