SANTA CRUZ BIOTECHNOLOGY, INC.

Mucin 1 (F-19): sc-6826

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Comm. 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.
5. Pandey, P., et al. 1995. Association of the DF3/MUC1 breast cancer antigen with Grb2 and the Sos/Ras exchange protein. Cancer Res. 55: 4000-4003.
6. Cloosen, S., et al. 2004. Mucin-1 is expressed on dendritic cells, both *in vitro* and *in vivo*. Int. Immunol.16: 1561-1571.
7. Horne, A.W. et al. 2005. The expression pattern of MUC1 glycoforms and other biomarkers of endometrial receptivity in fertile and infertile women. Mol. Reprod. Dev. 72: 216-229.
8. Handra-Luca, A. et al. 2005. MUC1, MUC2, MUC4, and MUC5AC expression in salivary gland mucoepidermoid carcinoma: diagnostic and prognostic implications. Am. J. Surg. Pathol. 29: 881-889.

CHROMOSOMAL LOCATION

Genetic locus: Muc1 (mouse) mapping to 3 F1.

SOURCE

Mucin 1 (F-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Mucin 1 of mouse origin.

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.

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-6826 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mucin 1 (F-19) is recommended for detection of Mucin 1 of mouse 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Mucin 1 siRNA (m): sc-37266, Mucin 1 shRNA Plasmid (m): sc-37266-SH and Mucin 1 shRNA (m) Lentiviral Particles: sc-37266-V.

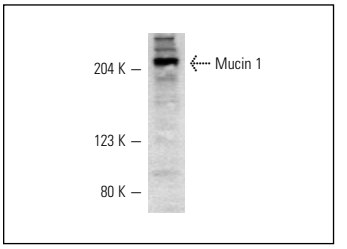
Molecular Weight of Mucin 1: 200 kDa.

Positive Controls: AT-3 whole cell lysate.

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 1 (F-19): sc-6826. Western blot analysis of Mucin 1 expression in AT-3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Jung, S.R., et al. 2009. Control of granule mobility and exocytosis by Ca^{2+}-dependent formation of F-actin in pancreatic duct epithelial cells. Traffic 10: 392-410.