SANTA CRUZ BIOTECHNOLOGY, INC.

Mucin 2 (P-18): sc-23170

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 com-ponent of various mucus gels and is broadly expressed in normal and tumor cells.

REFERENCES

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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 Muc 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/Muc 1 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. Baldus, S.E., et al. 2004. Muc 1 and the Mucs: a family of human Mucins with impact in cancer biology. Crit. Rev. Clin. Lab Sci. 41:189-231.

8. Schroeder, J.A., et al. 2004. Muc 1 overexpression results in mammary gland tumorigenesis and prolonged alveolar differentiation. Oncogene 23: 5739-5747.

CHROMOSOMAL LOCATION

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

SOURCE

Mucin 2 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-23170 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mucin 2 (P-18) is recommended for detection of precursor and mature Mucin 2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 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.

Positive Controls: SW480 cell lysate: sc-2219.

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) Immunofluo-rescence: 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
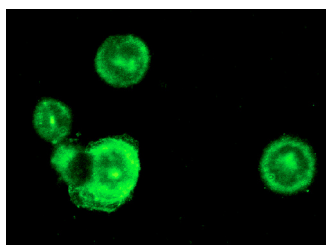
Mucin 2 (P-18): sc-23170. Immunofluorescence staining of methanol-fixed SW480 cells showing cytoplasmic and cell surface localization.

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 or our catalog for detailed protocols and support products.