SANTA CRUZ BIOTECHNOLOGY, INC.

Mucin 1 (BC-2): sc-52347

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. 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.

CHROMOSOMAL LOCATION

Genetic locus: MUC1 (human) mapping to 1q22.

SOURCE

Mucin 1 (BC-2) is a mouse monoclonal antibody raised against milk fat globulin membrane of human origin.

PRODUCT

Each vial contains IgG_1 in 500 µl of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Mucin 1 (BC-2) is recommended for detection of Mucin 1 of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [10-20 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

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.

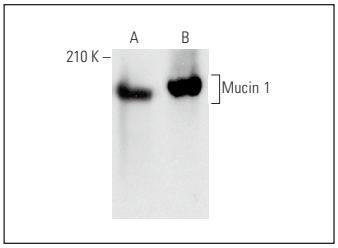
Molecular Weight of Mucin 1: 200 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, BT-20 cell lysate: sc-2223 or DU 145 cell lysate: sc-2268.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

DATA



Mucin 1 (BC-2): sc-52347. Western blot analysis of Mucin 1 expression in BT-20 (**A**) and DU 145 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Smith, J.S., et al. 2010. Blockade of MUC1 expression by glycerol guaiacolate inhibits proliferation of human breast cancer cells. Anticancer Agents Med. Chem. 10: 644-650.
2. Refaat, B., et al. 2012. Why does the fallopian tube fail in ectopic pregnancy? The role of activins, inducible nitric oxide synthase, and MUC1 in ectopic implantation. Fertil. Steril. 97: 1115-1123.
3. Arciniegas, E., et al. 2015. Mucin1 expression in focal epidermal dysplasia of actinic keratosis. Ann. Transl. Med. 3: 245.
4. Maria, O.M., et al. 2016. The role of human Fibronectin- or placenta basement membrane extract-based gels in favouring the formation of polarized salivary acinar-like structures. J. Tissue Eng. Regen. Med. 11: 2643-2657.
5. Wang, N., et al. 2018. Euxanthone suppresses tumor growth and metastasis in colorectal cancer via targeting CIP2A/PP2A pathway. Life Sci. 209: 498-506.
6. Deng, M., et al. 2019. MiR-206 inhibits proliferation, migration, and invasion of gastric cancer cells by targeting the MUC1 gene. Onco Targets Ther. 12: 849-859.

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.