SANTA CRUZ BIOTECHNOLOGY, INC.

Mucin 1 (H-295): sc-15333

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.

CHROMOSOMAL LOCATION

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

SOURCE

Mucin 1 (H-295) is a rabbit polyclonal antibody raised against amino acids 961-1255 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.

APPLICATIONS

Mucin 1 (H-295) is recommended for detection of Mucin 1 of human 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: MCF7 whole cell lysate: sc-2206, SW480 cell lysate: sc-2219 or BT-20 cell lysate: sc-2223.

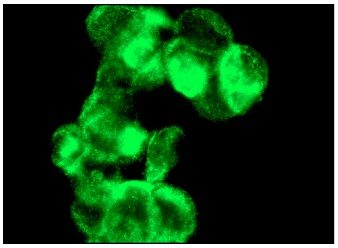
STORAGE

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

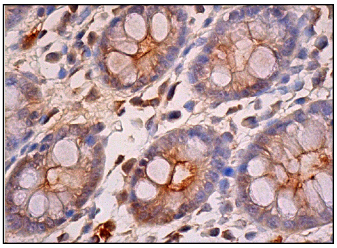
RESEARCH USE

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

DATA



Mucin 1 (H-295): sc-15333. Immunofluorescence staining of methanol-fixed MCF7 cells showing cell surface localization.



Mucin 1 (H-295): sc-15333. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Pisitkun, T., et al. 2004. Identification and proteomic profiling of exosomes in human urine. Proc. Natl. Acad. Sci. USA 6: 13368-13373.
2. Tallant, T., et al. 2004. Flagellin acting via TLR5 is the major activator of key signaling pathways leading to NFκB and proinflammatory gene program activation in intestinal epithelial cells. BMC Microbiol. 4: 33.
3. Zhang, Z., et al. 2005. Human airway epithelial cells sense *Pseudomonas aeruginosa* infection via recognition of flagellin by toll-like receptor 5. Infect. Immun. 73: 7151-7160.
4. Engelmann, K., et al. 2005. Transmembrane and secreted MUC1 probes show trafficking-dependent changes in O-glycan core profiles. Glycobiology 15: 1111-1124.
5. Lagergren, A., et al. 2007. The Cxcl12, Periostin, and CCL9 genes are direct targets for early B-cell factor in OP-9 stroma cells. J. Biol. Chem. 282: 14454-14462.
6. Zandi, S., et al. 2008. EBF1 is essential for B-lineage priming and establishment of a transcription factor network in common lymphoid progenitors. J. Immunol. 181: 3364-3372.
7. Fatrai, S., et al. 2008. Mucin 1 expression is enriched in the human stem cell fraction of cord blood and is upregulated in majority of the AML cases. Exp. Hematol. 36: 1254-1265.
8. Barbaro, V., et al. 2010. Evaluation of ocular surface disorders: a new diagnostic tool based on impression cytology and confocal laser scanning microscopy. Br. J. Ophthalmol. 94: 926-932.
9. Di Iorio, E., et al. 2012. Limbal stem cell deficiency and ocular phenotype in ectrodactyly-ectodermal dysplasia-clefting syndrome caused by p63 mutations. Ophthalmology 119: 74-83.
10. Ejarque, M., et al. 2013. Neurogenin3 cooperates with Foxa2 to autoactivate its own expression. J. Biol. Chem. 288: 11705-11717.