SANTA CRUZ BIOTECHNOLOGY, INC.

Mucin 5B (A-3): sc-393952

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mucins are a group of high molecular weight glycoproteins consisting of a mucin core protein and O-linked carbohydrates. The Mucin 5B gene, which contains a 3' *cis*-element, is one of the four mucin genes mapped to human chromosome 11p15.5. Although Mucin 5B is the prominent human gallbladder mucin, it is also expressed and secreted in the colon. In addition, Mucin 5B is expressed in non-inflammed middle ears and normal esophagus, and is upregulated by chronic inflammation and highly secreted in the diseased middle ear. Mucin 5B is abnormally expressed in gastric carcinomatous tissues. Its expression in gastric cancer cells is controlled by a highly active distal promoter, which is upregulated by protein kinase C and repressed under the influence of methylation. Mucous differentiation and expression of Mucin 5B is retinoic acid-(RA) or retinol-dependent. RA control of mucin gene is mediated by the retinoid acid receptor RARα and, to a lesser extent, by RARγ. The correlation of mucin protein levels in human cervical mucous with the peak at midcycle suggests that mucin may be important in sperm transit to the uterus.

CHROMOSOMAL LOCATION

Genetic locus: MUC5B (human) mapping to 11p15.5.

SOURCE

Mucin 5B (A-3) is a mouse monoclonal antibody raised against amino acids 1201-1500 mapping near the C-terminus of Mucin 5B of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mucin 5B (A-3) is available conjugated to agarose (sc-393952 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393952 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393952 PE), fluorescein (sc-393952 FITC), Alexa Fluor® 488 (sc-393952 AF488), Alexa Fluor® 546 (sc-393952 AF546), Alexa Fluor® 594 (sc-393952 AF594) or Alexa Fluor® 647 (sc-393952 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393952 AF680) or Alexa Fluor® 790 (sc-393952 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Mucin 5B (A-3) is recommended for detection of Mucin 5B of human origin by Western Blotting (starting dilution 1:100, 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 5B siRNA (h): sc-106263, Mucin 5B shRNA Plasmid (h): sc-106263-SH and Mucin 5B shRNA (h) Lentiviral Particles: sc-106263-V.

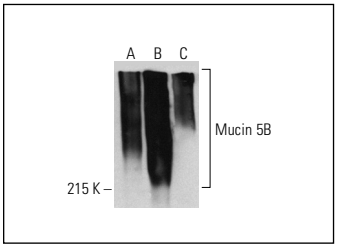
Molecular Weight of Mucin 5B: 600 kDa.

Positive Controls: human salivary gland extract: sc-363762, human salivary gland extract: sc-363762 or human bronchus extract: sc-363754.

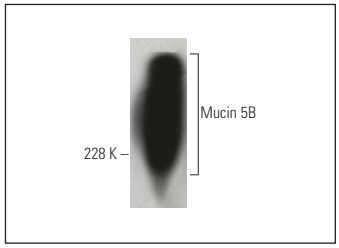
STORAGE

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

DATA



Mucin 5B (A-3): sc-393952. Western blot analysis of Mucin 5B expression in human bronchus (**A**), human salivary gland (**B**) and human saliva (**C**) tissue extracts.



Mucin 5B (A-3) HRP: sc-393952 HRP. Direct western blot analysis of Mucin 5B expression in human salivary gland tissue extract.

SELECT PRODUCT CITATIONS

1. Karelehto, E., et al. 2018. Polarized entry of human parechoviruses in the airway epithelium. Front. Cell. Infect. Microbiol. 8: 294.
2. Haas, M., et al. 2019. ΔN-Tp63 mediates Wnt/β-catenin-induced inhibition of differentiation in basal stem cells of mucociliary epithelia. Cell Rep. 28: 3338-3352.e6.
3. Sprott, R.F., et al. 2020. Flagellin shifts 3D bronchospheres towards mucus hyperproduction. Respir. Res. 21: 222.
4. Sun, H., et al. 2020. Low dose IL-2 suppress osteoclastogenesis in collagen-induced arthritis via JNK dependent pathway. Immun. Inflamm. Dis. 8: 727-735.
5. Boecking, C.A., et al. 2022. A simple method to generate human airway epithelial organoids with externally orientated apical membranes. Am. J. Physiol. Lung Cell. Mol. Physiol. 322: L420-L437.
6. Wang, R., et al. 2022. Human airway lineages derived from pluripotent stem cells reveal the epithelial responses to SARS-CoV-2 infection. Am. J. Physiol. Lung Cell. Mol. Physiol. 322: L462-L478.
7. Balázs, A., et al. 2022. Age-related differences in structure and function of nasal epithelial cultures from healthy children and elderly people. Front. Immunol. 13: 822437.
8. Sridhar, A., et al. 2022. Enterovirus D68 infection in human primary airway and brain organoids: no additional role for heparan sulfate binding for neurotropism. Microbiol. Spectr. 10: e0169422.
9. Arenhoevel, J., et al. 2024. Thiolated polyglycerol sulfate as potential mucolytic for muco-obstructive lung diseases. Biomater. Sci. 12: 4376-4385.

RESEARCH USE

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