

Mucin 16 (X306): sc-52095

BACKGROUND

The mucins are a family of highly glycosylated, secreted proteins with a basic structure consisting of a variable number of tandem repeats (VNTRs). Membrane-associated and secretory mucins are high molecular weight glycoproteins of the glycocalyx (polysaccharide biofilm) that protects mucosal epithelium from particulate matter and microorganisms. Epithelial mucins are large, secreted and cell surface glycoproteins crucial for adhesion modulation, signaling and epithelial cell protection. The number of repeats is highly polymorphic and varies among different alleles. The mucin family consists of Mucins 1-4, Mucin 5 (AC and B), Mucins 6-8, Mucins 11-13 and Mucins 15-17. The Mucin 16 protein (also commonly referred to as CA125), encoded for by the gene MUC16, is a very high molecular weight tumor antigen consisting of three domains: a carboxy-terminal domain, an extracellular domain and an amino-terminal domain. Mucin 16, an ovarian cancer-associated antigen, is used as a marker to monitor the progress of epithelial ovarian cancer. It is a hydrophilic membrane-associated protein that may be involved in vitamin A functions.

REFERENCES

1. Yin, B.W., et al. 2001. Molecular cloning of the CA125 ovarian cancer antigen: identification as a new mucin, MUC16. *J. Biol. Chem.* 276: 27371-27375.
2. Maeda, T., et al. 2004. Solution structure of the SEA domain from the murine homologue of ovarian cancer antigen CA125 (MUC16). *J. Biol. Chem.* 279: 13174-13182.

CHROMOSOMAL LOCATION

Genetic locus: MUC16 (human) mapping to 19p13.2.

SOURCE

Mucin 16 (X306) is a mouse monoclonal antibody raised against full length Mucin 16 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Mucin 16 (X306) is recommended for detection of epitope specificity group A of Mucin 16 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Mucin 16 siRNA (h): sc-44971, Mucin 16 shRNA Plasmid (h): sc-44971-SH and Mucin 16 shRNA (h) Lentiviral Particles: sc-44971-V.

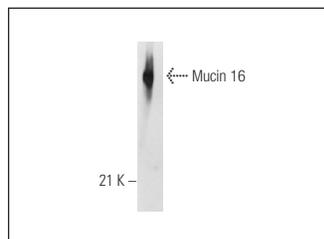
Molecular Weight of Mucin 16: 200-2000 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

STORAGE

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

DATA



Mucin 16 (X306): sc-52095. Western blot analysis of Mucin 16 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Chen, S.H., et al. 2012. Mucin 16 is a functional selectin ligand on pancreatic cancer cells. *FASEB J.* 26: 1349-1359.
2. Jørgensen, M., et al. 2013. Extracellular vesicle (EV) array: microarray capturing of exosomes and other extracellular vesicles for multiplexed phenotyping. *J. Extracell. Vesicles*. E-published.
3. Jørgensen, M.M., et al. 2015. Potentials and capabilities of the extracellular vesicle (EV) array. *J. Extracell. Vesicles* 4: 26048.
4. Jakobsen, K.R., et al. 2015. Exosomal proteins as potential diagnostic markers in advanced non-small cell lung carcinoma. *J. Extracell. Vesicles* 4: 26659.
5. Bæk, R., et al. 2016. Does smoking, age or gender affect the protein phenotype of extracellular vesicles in plasma? *Transfus. Apher. Sci.* 55: 44-52.
6. Søndergaard, E.K.L., et al. 2016. Oxygen-related differences in cellular and vesicular phenotypes observed for ovarian cell cancer lines. *J. Circ. Biomark.* 5: 1.
7. Sandfeld-Paulsen, B., et al. 2016. Exosomal proteins as diagnostic biomarkers in lung cancer. *J. Thorac. Oncol.* 11: 1701-1710.
8. Yu, H., et al. 2017. Siglec-8 and Siglec-9 binding specificities and endogenous airway ligand distributions and properties. *Glycobiology* 27: 657-668.
9. Adeel, M., et al. 2021. Self-therapeutic cobalt hydroxide nanosheets (Co(OH)₂ NS) for ovarian cancer therapy. *ACS Omega* 6: 28611-28619.

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.