

# Mucin 16 (H-150): sc-99166

## 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.
3. Hori, Y., et al. 2005. Effect of retinoic acid on gene expression in human conjunctival epithelium: secretory phospholipase A2 mediates retinoic acid induction of Mucin 16. *Invest. Ophthalmol. Vis. Sci.* 46: 4050-4061.
4. Palmi-Pallag, T., et al. 2005. The role of the SEA (sea urchin sperm protein, enterokinase and agrin) module in cleavage of membrane-tethered mucins. *FEBS J.* 272: 2901-2911.
5. Modrak, D.E., et al. 2005. Identification of a Mu-9 (anti-colon-specific antigen-p)-reactive peptide having homology to CA125 (Mucin 16). *Int. J. Oncol.* 26: 1591-1596.

## CHROMOSOMAL LOCATION

Genetic locus: MUC16 (human) mapping to 19p13.2; Muc16 (mouse) mapping to 9 A2.

## SOURCE

Mucin 16 (H-150) is a rabbit polyclonal antibody raised against amino acids 6419-6568 mapping near the C-terminus of Mucin 16 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.

## RESEARCH USE

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

## APPLICATIONS

Mucin 16 (H-150) is recommended for detection of Mucin 16 of human and, to a lesser extent, mouse 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) 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 siRNA (m): sc-149700, Mucin 16 shRNA Plasmid (h): sc-44971-SH, Mucin 16 shRNA Plasmid (m): sc-149700-SH, Mucin 16 shRNA (h) Lentiviral Particles: sc-44971-V and Mucin 16 shRNA (m) Lentiviral Particles: sc-149700-V.

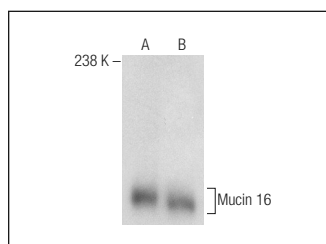
Molecular Weight of Mucin 16: 200-2000 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or SK-OV-3 whole cell lysate: sc-364229.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Mucin 16 (H-150): sc-99166. Western blot analysis of Mucin 16 expression in HeLa (A) and SK-OV-3 (B) whole cell lysates.

## STORAGE

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



Try **Mucin 16 (C-6): sc-365002** or **Mucin 16 (X325): sc-52096**, our highly recommended monoclonal alternatives to Mucin 16 (H-150).