

# **MUC1** Antibody

Mouse Monoclonal Antibody (Mab) Catalog # AM2009b

## **Product Information**

**Application** WB, E **Primary Accession** P15941

Other Accession NP 001018017.1, NP 001018016.1

Reactivity Human
Host Mouse
Clonality Monoclonal
Isotype IgG2b
Clone Names 347CT26.1.3
Calculated MW 122102

## **Additional Information**

**Gene ID** 4582

Other Names Mucin-1, MUC-1, Breast carcinoma-associated antigen DF3, Cancer antigen

15-3, CA 15-3, Carcinoma-associated mucin, Episialin, H23AG, Krebs von den Lungen-6, KL-6, PEMT, Peanut-reactive urinary mucin, PUM, Polymorphic epithelial mucin, PEM, Tumor-associated epithelial membrane antigen, EMA,

Tumor-associated mucin, CD227, Mucin-1 subunit alpha, MUC1-NT, MUC1-alpha, Mucin-1 subunit beta, MUC1-beta, MUC1-CT, MUC1, PUM

Target/Specificity Purified His-tagged MUC1 protein(N-terminal fragment ) was used to

produced this monoclonal antibody.

**Dilution** WB~~1:500~1000 E~~Use at an assay dependent concentration.

**Format** Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.

This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation

followed by dialysis against PBS.

**Storage** Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store

at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions** MUC1 Antibody is for research use only and not for use in diagnostic or

therapeutic procedures.

## **Protein Information**

Name MUC1

Synonyms PUM

#### **Function**

The alpha subunit has cell adhesive properties. Can act both as an adhesion and an anti-adhesion protein. May provide a protective layer on epithelial cells against bacterial and enzyme attack.

#### **Cellular Location**

Apical cell membrane; Single-pass type I membrane protein. Note=Exclusively located in the apical domain of the plasma membrane of highly polarized epithelial cells After endocytosis, internalized and recycled to the cell membrane Located to microvilli and to the tips of long filopodial protusions [Isoform Y]: Secreted. [Mucin-1 subunit beta]: Cell membrane. Cytoplasm. Nucleus. Note=On EGF and PDGFRB stimulation, transported to the nucleus through interaction with CTNNB1, a process which is stimulated by phosphorylation. On HRG stimulation, colocalizes with JUP/gamma-catenin at the nucleus

### **Tissue Location**

Expressed on the apical surface of epithelial cells, especially of airway passages, breast and uterus. Also expressed in activated and unactivated T-cells. Overexpressed in epithelial tumors, such as breast or ovarian cancer and also in non-epithelial tumor cells. Isoform Y is expressed in tumor cells only

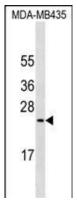
## **Background**

This gene is a member of the mucin family and encodes a membrane bound, glycosylated phosphoprotein. The protein is anchored to the apical surface of many epithelia by a transmembrane domain, with the degree of glycosylation varying with cell type. It also includes a 20 aa variable number tandem repeat (VNTR) domain, with the number of repeats varying from 20 to 120 in different individuals. The protein serves a protective function by binding to pathogens and also functions in a cell signaling capacity. Overexpression, aberrant intracellular localization, and changes in glycosylation of this protein have been associated with carcinomas. Multiple alternatively spliced transcript variants that encode different isoforms of this gene have been reported, but the full-length nature of only some has been determined. [provided by RefSeq].

## References

Behrens, M.E., et al. Oncogene 29(42):5667-5677(2010) Lacunza, E., et al. Cancer Genet. Cytogenet. 201(2):102-110(2010) Meyer, T.E., et al. PLoS Genet. 6 (8) (2010): Beatson, R.E., et al. Immunotherapy 2(3):305-327(2010) Caffery, B., et al. Mol. Vis. 16, 1720-1727 (2010):

## **Images**



MUC1 Antibody (Cat. #AM2009b) western blot analysis in MDA-MB435 cell line lysates ( $35\mu g$ /lane).This demonstrates the MUC1 antibody detected the MUC1 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.