

# MUC1 / EMA / CD227 (Epithelial Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone HMPV ]

Catalog # AH11857

## Product Information

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<b>Application</b>	IF, FC, IHC-P
<b>Primary Accession</b>	<a href="#">P15941</a>
<b>Other Accession</b>	<a href="#">4582</a> , <a href="#">89603</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Isotype</b>	Mouse / IgG1, kappa
<b>Clone Names</b>	HMPV
<b>Calculated MW</b>	122102

## Additional Information

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<b>Gene ID</b>	4582
<b>Other Names</b>	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
<b>Application Note</b>	IF~~1:50~200 FC~~1:10~50 IHC-P~~N/A
<b>Storage</b>	Store at 2 to 8°C.Antibody is stable for 24 months.
<b>Precautions</b>	MUC1 / EMA / CD227 (Epithelial Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	MUC1
<b>Synonyms</b>	PUM
<b>Function</b>	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.
<b>Cellular Location</b>	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 protrusions [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

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This MAb recognizes full-length MUC1 in a glycosylation-independent manner and can bind to the fully glycosylated protein. The dominant epitope of this MAb is APDTR in the VNTR region. It reacts with the core peptide of the MUC1 protein, which is a member of a family of mucin glycoproteins that are characterized by high carbohydrate content, O-linked oligosaccharides, high molecular weight (>200kDa) and an amino acid composition rich in serine, threonine, proline and glycine. The core protein contains a domain of 20 amino-acid tandem repeats that functions as multiple epitopes for the MAb. Incomplete glycosylation of some tumor-associated mucins may lead to variable unmasking of the multiple peptide epitopes leading to the observed differences in staining intensity between normal and malignant tissues. This MAb reacts with both normal and malignant epithelia of various tissues including breast and colon.

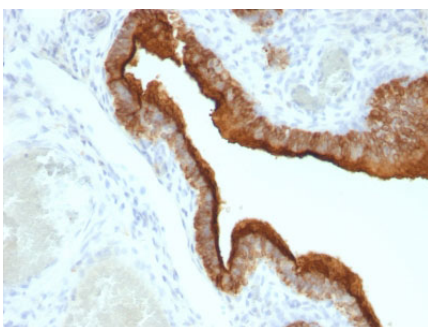
## References

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Xing PX, Prenzoska J, McKenzie IF. Epitope mapping of anti-breast and anti-ovarian mucin monoclonal antibodies. Mol Immunol. 1992 May;29(5):641-50. | Uwe Karsten, Catherine Diotel, Gunther Klich, Hans Paulsen, Steffen Goletz, Stefan Muller, and Franz-Georg Hanisch. Enhanced Binding of Antibodies to the DTR Motif of MUC1 Tandem Repeat Peptide Is Mediated by Site-specific Glycosylation<sup>1</sup>. Cancer Research 58, 2541-2549, June 15. 1998 | Devine PL, Birrell GW, Whitehead RH, Harada H, Xing PX, McKenzie IF. Expression of MUC1 and MUC2 mucins by human tumor cell lines. Tumour Biol. 1992; 13(5):268-277

## Images

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Formalin-fixed, paraffin-embedded human Ovarian Carcinoma stained with EMA Monoclonal Antibody (HMPV).

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