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

Mouse Monoclonal Antibody [Clone VU-2G7]
Catalog # AH11854

Product Information

Application	IF, FC, IHC-P
Primary Accession	P15941
Other Accession	4582, 89603
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	VU-2G7
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
Application Note	IF~~1:50~200 FC~~1:10~50 IHC-P~~N/A
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	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

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

MAb VU-2G7 reacts with MUC1, a large transmembrane glycoprotein expressed on the ductal surface of normal glandular epithelia. The dominant epitope of VU-2G7 has not been established with epitope fingerprinting The?extra cellular domain of MUC1 largely consists of a highly conserved, O-glycosylated 20 amino acids tandem repeat which can occur 30-100 times per molecule depending on the length of the allele involved. In the vast majority of human carcinomas this protein is up regulated and poorly glycosylated and appears on the cell surface in a non-polarized fashion.

References

Ryuko K, Schol DJ, Snijdewint FG, von Mensdorff-Pouilly S, Poort- Keesom RJ, Karuntu-Wanamarta YA, Verstraeten RA, Miyazaki K, Kenemans P, Hilgers J: Characterization of a new MUC1 monoclonal antibody (VU-2-G7) directed to the glycosylated PDTR sequence of MUC1. Tumour Biol., 21(4):197-210 (2000). | 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 Glycosylation1. Cancer Research 58, 2541-2549, June 15. 199