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Mucin 1 / EMA / Episialin / CD227 Monoclonal Mouse Antibody (VU-4H5)

Product Description

MAb VU-4H5 reacts with MUC1, a large transmembrane glycoprotein expressed on the ductal surface of normal glandular epithelia. The dominant epitope of MAb VU4H5 is APDTR as established with 'epitope fingerprinting'. VU-4H5 preferentially binds to under-glycosylated 'tumor' MUC1. The extracellular 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 upregulated and poorly glycosylated and appears on the cell surface in a non-polarized fashion. Antibody to EMA is useful as a pan-epithelial marker for detecting early metastatic loci of carcinoma in bone marrow or liver.

Product attributes

Antibody number	#0431
Antibody reactivity (target)	CA15-3, CD227, EMA, MUC1
Antibody type	Primary
Host species	Mouse
Clonality	Monoclonal
Clone	VU-4H5
Isotype	IgG1, kappa
Molecular weight	265-400 kDa
Synonyms	Breast carcinoma-associated antigen DF3, CA15-3, Carcinoma-associated mucin Episialin, Epithelial Membrane Antigen, H23AG, KL-6, MAM6, MUC1-alpha, MUC1-beta, MUC1-CT, MUC1-NT, MUC1/ZD, Mucin-1 subunit beta, Peanut-reactive urinary mucin, PEM, PEMT, Polymorphic epithelial mucin, PUM, Tumor-associated epithelial membrane antigen
Human gene symbol	MUC1
Entrez gene ID	4582
SwissProt	P15941
Unigene	89603
Immunogen	Synthetic glycosylated MUC1 60mer tandem repeat NH2-(HGVTSAPDT(GalNAc)RPAPGSTAPPAH(COOH, conjugated to bovine serum albumin
Antibody target cellular localization	Plasma membrane
Verified antibody applications	IHC (FFPE) (verified)
Species reactivity	Human
Antibody application notes	Higher concentration may be required for direct detection using primary antibody conjugates than for indirect detection with secondary antibody, Immunofluorescence: 1-2 ug/mL, Immunohistochemistry (formalin-fixed): 0.5-1 ug/mL for 30 minutes at RT, Western blot: 1-2 ug/mL, Flow cytometry: 0.5-1 ug/million cells, Staining of formalin-fixed tissues requires boiling tissue sections in 10 mM citrate buffer, pH 6.0, for 10-20 minutes followed by cooling at RT for 20 minutes, Optimal dilution for a specific application should be determined by user
Positive control	MCF-7 or MDA-231 cells. Breast, colon, ovarian, endometrial carcinoma.
Shipping condition	Room temperature
Storage Conditions	Store at 2 to 8 °C, Protect fluorescent conjugates from light, Note: store BSA-free antibodies at -10 to -35 °C
Regulatory status	For research use only (RUO)
Antibody/conjugate formulation	Conjugates: 0.1 mg/mL in PBS/0.1% BSA/0.05% azide, HRP conjugates: 0.1 mg/mL in PBS/0.05% BSA, Purified: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide, Purified, BSA-free: 1 mg/mL in PBS without azide
Shelf life	Guaranteed for at least 24 months from date of receipt when stored as recommended
Cell/tissue expression	Epithelial cells, Mammary gland
Tumor expression	Breast cancer
Antibody research areas	Cancer, Mucins