

#4538 Store at -20°C

MUC1 (VU4H5) Mouse mAb


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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IHC-P, IF-IC, FC-FP	H	Endogenous	230, 400	Mouse IgG1	#P15941	4582

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
	Immunohistochemistry (Paraffin)	1:100
	Immunofluorescence (Immunocytochemistry)	1:200
	Flow Cytometry (Fixed/Permeabilized)	1:1600
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.	
	For a carrier free (BSA and azide free) version of this product see product #68123.	
Specificity / Sensitivity	MUC1 (VU4H5) Mouse mAb detects endogenous levels of total MUC1. This antibody does not cross-react with other mucin proteins.	
Source / Purification	Monoclonal antibody (isotype: IgG1k) is produced by immunizing a BALB/c mouse with MUC1 60 mer tandem repeats (BSA conjugated).	
Background	Mucins represent a family of glycoproteins characterized by repeat domains and dense O-glycosylation (1). MUC1 (or mucin 1) is aberrantly overexpressed in most human carcinomas. Increased expression of MUC1 in carcinomas reduces cell-cell and cell-ECM interactions. MUC1 is cleaved proteolytically, and the large ectodomain can remain associated with the small 25 kDa carboxy-terminal domain that contains a transmembrane segment and a 72-residue cytoplasmic tail (1). MUC1 interacts with ErbB family receptors and potentiates ERK1/2 activation (2). MUC1 also interacts with β-catenin, which is regulated by GSK-3β, PKCγ, and Src through phosphorylation at Ser44, Thr41, and Tyr46 of the MUC1 cytoplasmic tail (3-5). Overexpression of MUC1 potentiates transformation (6) and attenuates stress-induced apoptosis through the Akt or p53 pathways (7,8).	
Background References	1. Baldus, S.E. et al. (2004) <i>Crit Rev Clin Lab Sci</i> 41, 189-231. 2. Schroeder, J.A. et al. (2001) <i>J Biol Chem</i> 276, 13057-64. 3. Li, Y. et al. (1998) <i>Mol Cell Biol</i> 18, 7216-24. 4. Li, Y. et al. (2001) <i>J Biol Chem</i> 276, 6061-4. 5. Ren, J. et al. (2002) <i>J Biol Chem</i> 277, 17616-22. 6. Schroeder, J.A. et al. (2004) <i>Oncogene</i> 23, 5739-47. 7. Raina, D. et al. (2004) <i>J Biol Chem</i> 279, 20607-12. 8. Wei, X. et al. (2005) <i>Cancer Cell</i> 7, 167-78.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting IHC-P: Immunohistochemistry (Paraffin) IF-IC: Immunofluorescence (Immunocytochemistry) FC-FP: Flow Cytometry (Fixed/Permeabilized)
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected

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