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MUC1 (D9O8K) XP® Rabbit mAb (PE Conjugate)



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TECHNOLOGY®

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

Applications: FC-FP, FC-L	Reactivity: H	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P15941	Entrez-Gene Id: 4582
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Product Usage Information	Application Flow Cytometry (Fixed/Permeabilized) Flow Cytometry (Live)	Dilution 1:50 1:50
Storage	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.	
Specificity / Sensitivity	MUC1 (D9O8K) XP® Rabbit mAb (PE Conjugate) detects endogenous levels of total MUC1 protein.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human MUC1 protein.	
Product Description	This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated MUC1 (D9O8K) XP® Rabbit mAb #14161.	
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-3 β , PKC γ , 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).
Applications Key	FC-FP: Flow Cytometry (Fixed/Permeabilized) FC-L: Flow Cytometry (Live)
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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