

**MUC1 (D9O8K) XP<sup>®</sup> Rabbit mAb**

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

<b>Applications:</b> W, W-S, IP, IF-IC, FC-FP, FC-L	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 230, 400	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P15941	<b>Entrez-Gene Id:</b> 4582
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**Product Usage Information****Application**

Western Blotting  
Simple Western™  
Immunoprecipitation  
Immunofluorescence (Immunocytochemistry)  
Flow Cytometry (Fixed/Permeabilized)  
Flow Cytometry (Live)

**Dilution**

1:1000  
1:10 - 1:50  
1:50  
1:400  
1:200  
1:200

**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 #20246.

**Specificity/Sensitivity**

MUC1 (D9O8K) XP<sup>®</sup> Rabbit mAb detects endogenous levels of total MUC1 protein. Because this protein is heavily glycosylated, multiple bands or a smear may result from western blot analysis using this antibody.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human MUC1 protein.

**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**

- Baldus, S.E. et al. (2004) *Crit Rev Clin Lab Sci* 41, 189-231.
- Schroeder, J.A. et al. (2001) *J Biol Chem* 276, 13057-64.
- Li, Y. et al. (1998) *Mol Cell Biol* 18, 7216-24.
- Li, Y. et al. (2001) *J Biol Chem* 276, 6061-4.
- Ren, J. et al. (2002) *J Biol Chem* 277, 17616-22.
- Schroeder, J.A. et al. (2004) *Oncogene* 23, 5739-47.
- Raina, D. et al. (2004) *J Biol Chem* 279, 20607-12.
- Wei, X. et al. (2005) *Cancer Cell* 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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized) **FC-L:** Flow Cytometry (Live)

**Cross-Reactivity Key**

**H:** Human

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