

#14161 Store at -20C

**MUC1 (D9O8K) XP® Rabbit mAb****Cell Signaling**  
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3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC, FC-FP, FC-L	H	Endogenous	230, 400	Rabbit IgG	#P15941	4582

**Product Usage Information****Application****Dilution**

Western Blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (Immunocytochemistry)	1:400
Flow Cytometry (Fixed/Permeabilized)	1:200
Flow Cytometry (Live)	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® 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**

1. Baldus, S.E. et al. (2004) *Crit Rev Clin Lab Sci* 41, 189-231.
2. Schroeder, J.A. et al. (2001) *J Biol Chem* 276, 13057-64.
3. Li, Y. et al. (1998) *Mol Cell Biol* 18, 7216-24.
4. Li, Y. et al. (2001) *J Biol Chem* 276, 6061-4.
5. Ren, J. et al. (2002) *J Biol Chem* 277, 17616-22.
6. Schroeder, J.A. et al. (2004) *Oncogene* 23, 5739-47.
7. Raina, D. et al. (2004) *J Biol Chem* 279, 20607-12.
8. 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**

**WB:** Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)  
**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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