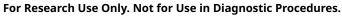
## SMAD2 (D43B4) XP® Rabbit mAb Image: Cell Signaling Tele H N O L O G Y\* Orders: 877-616-CELL (2355) orders@cellsignal.com Support: 877-678-TECH (8324) Web: info@cellsignal.com cellsignal.com 3 Trask Lane | Danvers | Massachusetts | 01923 | USA



<b>Applications:</b> W, IP, IF-IC, FC-FP, ChIP	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 60	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q62432	Entrez-Gene Id: 17126
Product Usage Information		For optimal ChIP results, use 10 μl of antibody and 10 μg of chromatin (approximately 4 x 10 <sup>6</sup> cells) per IP. This antibody has been validated using SimpleChIP <sup>®</sup> Enzymatic Chromatin IP Kits.				
		<b>Application</b> Western Blotting Immunoprecipitation Immunofluorescence Flow Cytometry (Fixed Chromatin IP	(Immunocytochem	istry)	1:1 1:5 1:5	0 - 1:200 00 - 1:400
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 #83065.				
Specificity/Sensitivity		SMAD2 (D43B4) XP <sup>®</sup> Rabbit mAb detects endogenous levels of total SMAD2 protein. This antibody does not cross-react with SMAD3.				
Source / Purification		Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of mouse SMAD2 protein.				
Background		Members of the SMAD family of signal transduction molecules are components of a critical intracellular pathway that transmit TGF-β signals from the cell surface into the nucleus. Three distinct classes of SMADs have been defined: the receptor-regulated SMADs (R-SMADs), which include SMAD1, 2, 3, 5, and 9; the common-mediator SMAD (co-SMAD), SMAD4; and the antagonistic or inhibitory SMADs (I- SMADs), SMAD6 and 7 (1-5). Activated type I receptors associate with specific R-SMADs and phosphorylate them on a conserved carboxy-terminal SSXS motif. The phosphorylated R-SMADs dissociate from the receptor and form a heteromeric complex with SMAD4, initiating translocation of the heteromeric SMAD complex to the nucleus. Once in the nucleus, SMADs recruit a variety of DNA binding proteins that function to regulate transcriptional activity (6-8).				
Background References		<ol> <li>Heldin, C.H. et al. (1997) Nature 390, 465-71.</li> <li>Attisano, L. and Wrana, J.L. (1998) Curr Opin Cell Biol 10, 188-94.</li> <li>Derynck, R. et al. (1998) Cell 95, 737-40.</li> <li>Massagué, J. (1998) Annu Rev Biochem 67, 753-91.</li> <li>Whitman, M. (1998) Genes Dev 12, 2445-62.</li> <li>Wrana, J.L. (2000) Sci STKE 2000, re1.</li> <li>Attisano, L. and Wrana, J.L. (2002) Science 296, 1646-7.</li> <li>Moustakas, A. et al. (2001) J Cell Sci 114, 4359-69.</li> </ol>				
Species Reactivity		Species reactivity is determined by testing in at least one approved application (e.g., western blot).				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.				n 5% w/v BSA, 1X
Applications Key		W: Western Blotting IP: Immunoprecipitation IF-IC: Immunofluorescence (Immunocytochemistry) FC- FP: Flow Cytometry (Fixed/Permeabilized) ChIP: Chromatin IP				
Cross-Reactivity Key		H: Human M: Mouse R: Rat Mk: Monkey				
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