

#3102 Store at -20°C

## SMAD2/3 Antibody



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk	Endogenous	52, 60	Rabbit	#P84022, #Q15796	4088, 4087

<b>Product Usage Information</b>	<b>Application</b> Western Blotting Immunoprecipitation	<b>Dilution</b> 1:1000 1:50
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
<b>Specificity / Sensitivity</b>	SMAD2/3 Antibody detects endogenous levels of total SMAD2/3 protein.	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues in the amino-terminal region of human SMAD2/3. Antibodies are purified by protein A and peptide affinity chromatography.	
<b>Background</b>	<p>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).</p> <p>Following stimulation by TGF-β, Smad2 and Smad3 become phosphorylated at their carboxyl termini (Ser465 and 467 on Smad2; Ser423 and 425 on Smad3) by TGF-β Receptor I. Phosphorylated Smad 2/3 can complex with Smad4, translocate to the nucleus and regulate gene expression (9-11).</p>	
<b>Background References</b>	<ol style="list-style-type: none"> <li>Heldin, C.H. et al. (1997) <i>Nature</i> 390, 465-71.</li> <li>Attisano, L. and Wrana, J.L. (1998) <i>Curr Opin Cell Biol</i> 10, 188-94.</li> <li>Derynck, R. et al. (1998) <i>Cell</i> 95, 737-40.</li> <li>Massagué, J. (1998) <i>Annu Rev Biochem</i> 67, 753-91.</li> <li>Whitman, M. (1998) <i>Genes Dev</i> 12, 2445-62.</li> <li>Wrana, J.L. (2000) <i>Sci STKE</i> 2000, re1.</li> <li>Attisano, L. and Wrana, J.L. (2002) <i>Science</i> 296, 1646-7.</li> <li>Moustakas, A. et al. (2001) <i>J Cell Sci</i> 114, 4359-69.</li> <li>Abdollah, S. et al. (1997) <i>J Biol Chem</i> 272, 27678-85.</li> <li>Souchelnytskyi, S. et al. (1997) <i>J Biol Chem</i> 272, 28107-15.</li> <li>Liu, X. et al. (1997) <i>Proc Natl Acad Sci U S A</i> 94, 10669-74.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	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.
<b>Applications Key</b>	<b>WB:</b> Western Blotting <b>IP:</b> Immunoprecipitation
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected

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