

#3122 Store at -20°C

Smad2 (86F7) Rabbit mAb

✓ 100 µl (10 western blots)



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rev. 06/04/10

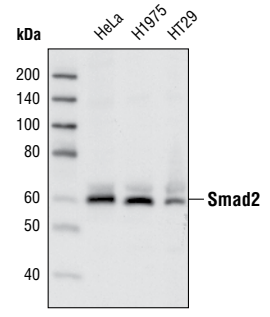
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC Endogenous	H, Mk	60 kDa	Rabbit IgG**

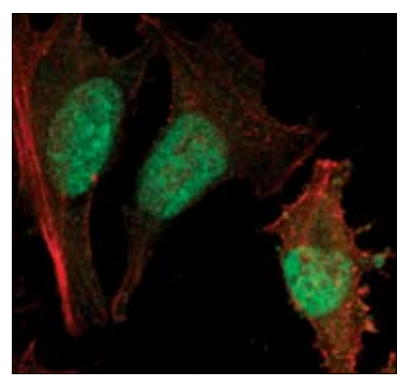
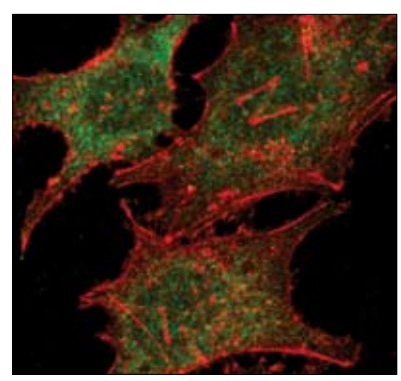
Background: Members of the Smad family of signal transduction molecules are components of a critical intracellular pathway that transmits TGF-β signals from the cell surface into the nucleus. Three distinct classes of Smads have been defined: the receptor-regulated Smads (R-Smads), which include Smad1, 2, 3, 5 and 8, 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-Smad dissociates from the receptor and forms a heteromeric complex with the co-Smad (Smad4), allowing translocation of the complex to the nucleus. Once in the nucleus, Smads can target a variety of DNA binding proteins to regulate transcriptional responses (6-8).

Specificity/Sensitivity: Smad2 (86F7) Rabbit mAb detects endogenous levels of total Smad2 protein. No cross reactivity was detected with Smad3.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Trp85 of human Smad2.



Western blot analysis of extracts from HeLa, H1975 and HT29 cell lines, using Smad2 (86F7) Rabbit mAb.



Confocal immunofluorescent analysis of HeLa cells, untreated (left) or TGF-β treated (right), using Smad2 (86F7) Rabbit mAb (green). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (red)

Entrez-Gene ID # 4087
Swiss-Prot Acc. # Q15796

Storage: 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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (IF-IC)	1:400

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

- (1) Heldin, C.H. et al. (1997) *Nature* 390, 465-471.
- (2) Attisano, L. and Wrana, J.L. (1998) *Curr. Opin. Cell Biol.* 10, 188-194.
- (3) Derynck, R. et al. (1998) *Cell* 95, 737-740.
- (4) Massague, J. (1998) *Annu. Rev. Biochem.* 67, 753-791.
- (5) Whitman, M. (1998) *Genes Dev.* 12, 2445-2462.
- (6) Wu, G. et al. (2000) *Science* 287, 92-97.
- (7) Attisano, L. and Wrana, J.L. (2002) *Science* 296, 1646-1647.
- (8) Moustakas, A. et al. (2001) *J. Cell Sci.* 114, 4359-4369.

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

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Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.