

#12470 Store at -20°C

Smad2/3 (D7G7) XP[®] Rabbit mAb (Biotinylated)

✓ 100 µl
(10 western blots)



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New 04/13

For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #4087, 4088
Swiss-Prot Acc. #Q15796, P84022

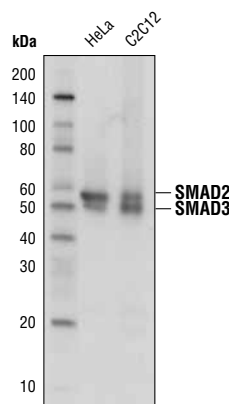
Applications W Endogenous	Species Cross-Reactivity* H, M, R, Mk	Molecular Wt. 52, 60 kDa	Isotype Rabbit IgG
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Description: This Cell Signaling Technology antibody is conjugated to biotin under optimal conditions. The biotinylated antibody is expected to exhibit the same species cross-reactivity as the unconjugated Smad2/3 (D7G7) XP[®] Rabbit mAb #8685.

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 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: Smad2/3 (D7G7) XP[®] Rabbit mAb (Biotinylated) recognizes endogenous levels of total Smad2/3 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding His198 of human Smad2/3 protein.



Western blot analysis of extracts from HeLa and C2C12 cells using Smad2/3 (D7G7) XP[®] Rabbit mAb (Biotinylated). Streptavidin-HRP #3999 was used for western detection.

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.

***Species cross-reactivity other than human is determined by western blot using the unconjugated antibody.**

Biotinylated antibodies are designed to be detected using streptavidin or anti-biotin antibody conjugates.

Recommended Antibody Dilutions:

Western blotting 1:1000

For product 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 complementary 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.

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

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 AI—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.