

Smad2 (D43B4) XP[®] Rabbit mAb (Biotinylated)

✓ 100 µl
(10 western blots)



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

Entrez Gene ID # 4087
UniProt ID # Q15796

Applications W Endogenous	Species Cross-Reactivity* H, M, R, Mk	Molecular Wt. 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 (D43B4) XP[®] Rabbit mAb #5339.

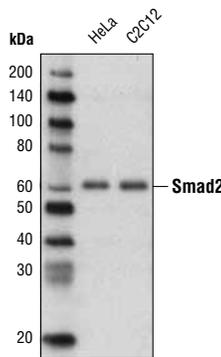
Background: Members of the Smad family of signal transduction molecules are components of a critical intracellular pathway that transmit TGF-β signals from the cell surface into the nucleus. Three distinct classes of Smads have been defined: the receptor-regulated Smads (R-Smads), which include Smad1, 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 (D43B4) XP[®] Rabbit mAb (Biotinylated) recognizes endogenous levels of total Smad2 protein. This antibody does not cross-react with Smad3 protein.

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 References:

- (1) Heldin, C.H. et al. (1997) *Nature* 390, 465-71.
- (2) Attisano, L. and Wrana, J.L. (1998) *Curr Opin Cell Biol* 10, 188-94.
- (3) Derynck, R. et al. (1998) *Cell* 95, 737-40.
- (4) Massagué, J. (1998) *Annu Rev Biochem* 67, 753-91.
- (5) Whitman, M. (1998) *Genes Dev* 12, 2445-62.
- (6) Wu, G. et al. (2000) *Science* 287, 92-7.
- (7) Attisano, L. and Wrana, J.L. (2002) *Science* 296, 1646-7.
- (8) Moustakas, A. et al. (2001) *J Cell Sci* 114, 4359-69.



Western blot analysis of extracts from HeLa and C2C12 cells using Smad2 (D43B4) XP[®] Rabbit mAb (Biotinylated).

Storage: Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity 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/companion for a complete listing of recommended companion products.

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.

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