

Smad3 Antibody

✓ 100 µl
(10 Western mini-blot)

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This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, IF-IC, F Endogenous	H, M, R	52, 60 kDa	Rabbit**

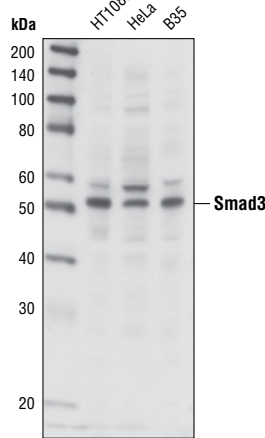
Background: Members of the Smad family of signal transduction molecules are components of a critical intracellular pathway that transmits TGF-β signals from the cell surface into the nucleus. Three distinct classes of Smads have been defined: the receptor-regulated Smads (R-Smads), which include Smad1, 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 SXS 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: Smad3 Antibody detects endogenous levels of total Smad3 protein.

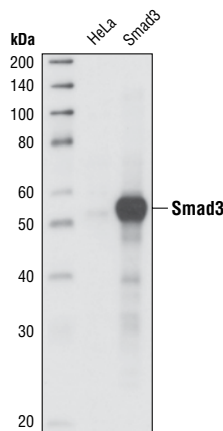
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to a central region unique to Smad3. Antibodies were purified by protein A and peptide affinity chromatography.

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. et al. (1998) *Genes Dev.* 12, 2445-2462.
- (6) Wrana, J. (2000) *Science* 23, 1-9.
- (7) Attisano, L. and Wrana, J. (2002) *Science* 296, 1646-1647.
- (8) Moustakas, A. et al. (2001) *J. Cell Sci.* 114, 4359-4369.



Western blot analysis of extracts from HT1080, HeLa and B35 cell lines, using Smad3 Antibody.



Western blot analysis of extracts from HeLa cells transfected with Smad3, using Smad3 Antibody.

Entrez-Gene ID # 4088
Swiss-Prot Acc. # P84022

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.

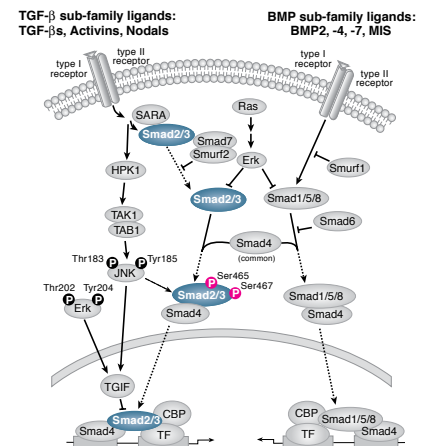
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

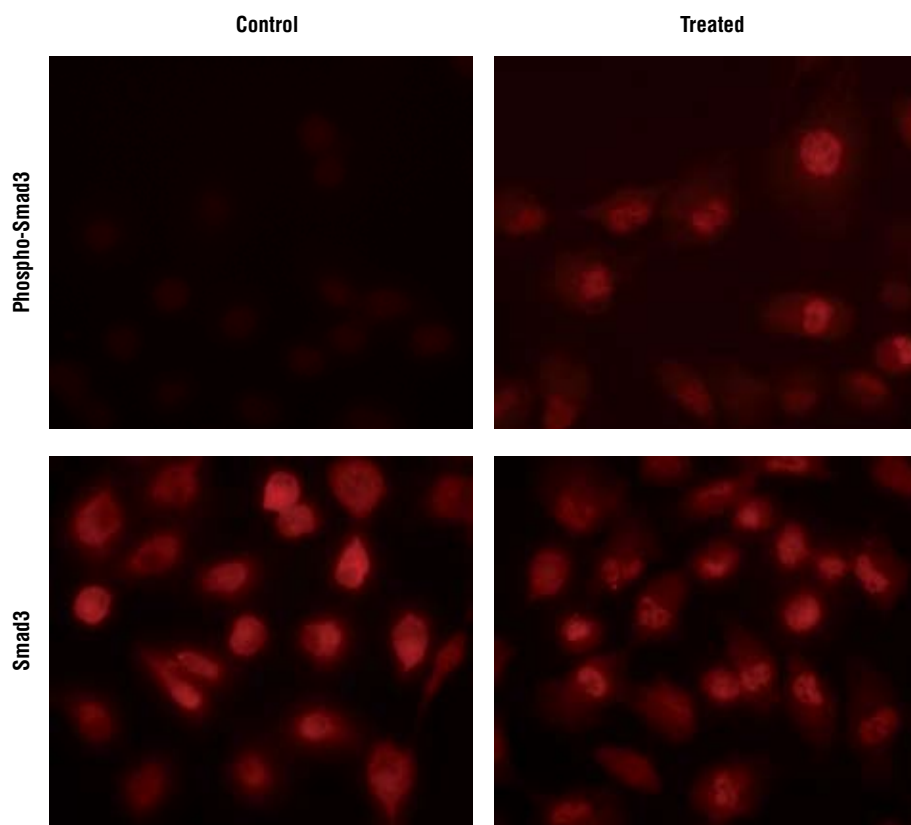
Western blotting	1:1000
Immunoprecipitation	1:25
Immunofluorescence (IF-IC)	1:50
Flow Cytometry	1:25

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

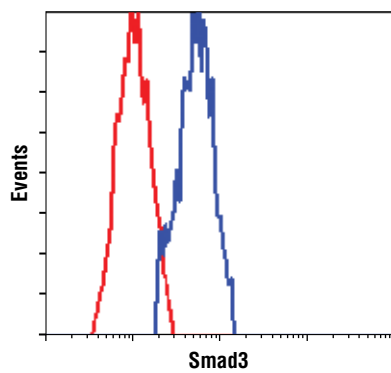
Please visit www.cellsignal.com for a complete listing of recommended companion products.



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.



Immunofluorescent analysis of ACHN cells treated with or without of TGF- β , using total Smad3 Antibody and Phospho-Smad3 (Ser423/425)/Smad1 (463/465) Antibody #9514.



Flow cytometric analysis of Hela cells using Smad3 antibody (blue) compared to a nonspecific negative control antibody (red).