

Smad3 Antibody

✓ 100 µl
(10 western blots)

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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.	Source
W, IP, IF-IC Endogenous	H, M, R	52 kDa	Rabbit**

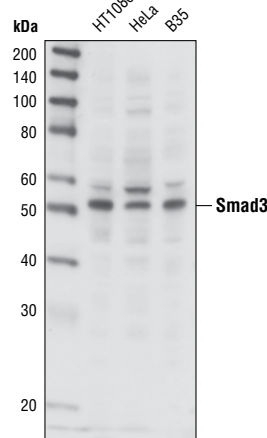
Background: Members of the Smad family of signal transduction molecules are components of a critical intracellular pathway that transmits TGF- β signals from the cell surface into the nucleus. Three distinct classes of Smads have been defined: the receptor-regulated Smads (R-Smads), which include Smad1,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

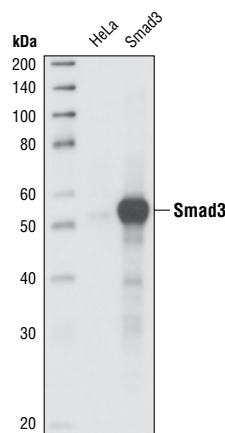
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to a central region unique to Smad3. Antibodies were purified by protein A and peptide affinity chromatography.

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.

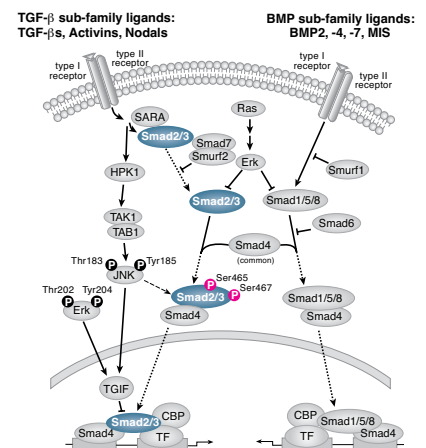
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

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

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.



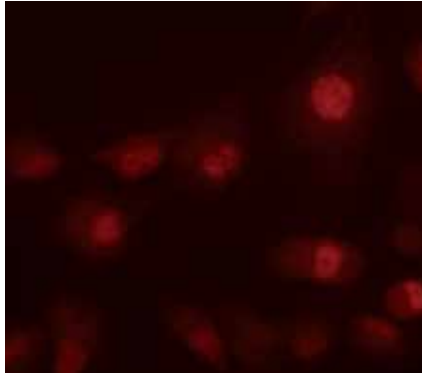
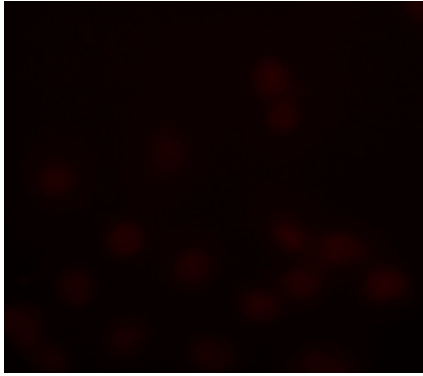
IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

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.

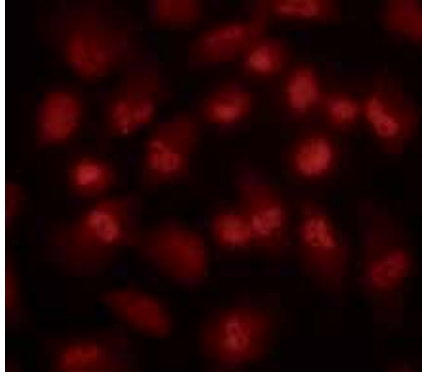
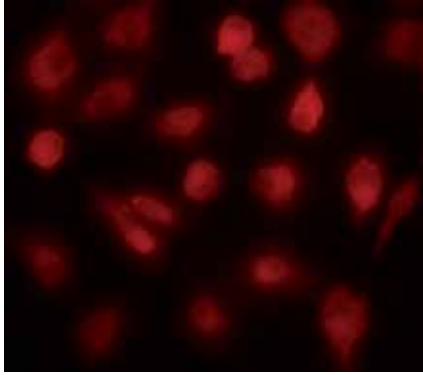
Control

Treated

Phospho-Smad3



Smad3



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.