

Smad2/3 (I-20): sc-6202

BACKGROUND

Smad proteins, the mammalian homologs of the *Drosophila* mothers against decapentaplegic (Mad), have been implicated as downstream effectors of TGF β /BMP signaling. Smad1 (also designated Madr1 or JV4-1) and Smad5 are effectors of BMP-2 and BMP-4 function, while Smad2 (also designated Madr2 or JV18-1) and Smad3 are involved in TGF β and activin-mediated growth modulation. Smad4 (also designated DPC4) has been shown to mediate all of the above activities through interaction with various Smad family members. Smad6 and Smad7 regulate the response to activin/TGF β signaling by interfering with TGF β -mediated phosphorylation of other Smad proteins.

CHROMOSOMAL LOCATION

Genetic locus: SMAD2 (human) mapping to 18q21.1, SMAD3 (human) mapping to 15q22.33; Smad2 (mouse) mapping to 18 E3, Smad3 (mouse) mapping to 9 C.

SOURCE

Smad2/3 (I-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Smad3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6202 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-6202 X, 200 μ g/0.1 ml.

APPLICATIONS

Smad2/3 (I-20) is recommended for detection of Smad2 and Smad3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Smad2/3 (I-20) is also recommended for detection of Smad2 and Smad3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Smad2/3 siRNA (h): sc-37238, Smad2/3 siRNA (m): sc-37239, Smad2/3 shRNA Plasmid (h): sc-37238-SH, Smad2/3 shRNA Plasmid (m): sc-37239-SH, Smad2/3 shRNA (h) Lentiviral Particles: sc-37238-V and Smad2/3 shRNA (m) Lentiviral Particles: sc-37239-V.

Smad2/3 (I-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Smad2/3: 55-60 kDa.

Positive Controls: Smad2 (m): 293T Lysate: sc-123638.

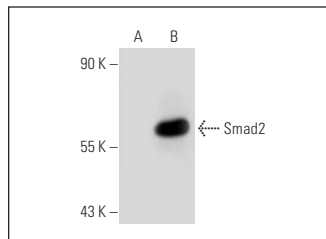
RESEARCH USE

For research use only, not for use in diagnostic procedures.

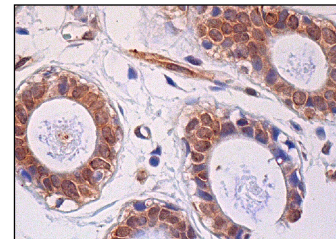
STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Smad2/3 (I-20): sc-6202. Western blot analysis of Smad2 expression in non-transfected: sc-117752 (A) and mouse Smad2 transfected: sc-123638 (B) 293T whole cell lysates.



Smad2/3 (I-20): sc-6202. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

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- Fatma, N., et al. 2009. Loss of NF κ B control and repression of Prdx6 gene transcription by reactive oxygen species-driven SMAD3-mediated transforming growth factor β signaling. *J. Biol. Chem.* 284: 22758-22772.
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- Shafer, S.L., et al. 2009. Transcriptional regulation of SM22 α by Wnt3a: convergence with TGF β 1/Smad signaling at a novel regulatory element. *J. Mol. Cell. Cardiol.* 46: 621-635.
- Déliot, N., et al. 2009. Biochemical studies and molecular dynamics simulations of Smad3-Erbin interaction identify a non-classical Erbin PDZ binding. *Biochem. Biophys. Res. Commun.* 378: 360-365.
- Upadhyay, G., et al. 2011. Stem cell Antigen-1 enhances tumorigenicity by disruption of growth differentiation factor-10 (GDF10)-dependent TGF- β signaling. *Proc. Natl. Acad. Sci. USA* 108: 7820-7825.
- Li, J., et al. 2013. The oncogenic TBX3 is a downstream target and mediator of the TGF- β 1 signaling pathway. *Mol. Biol. Cell* 24: 3569-3576.
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Try **Smad2/3 (C-8): sc-133098** or **Smad2/3 (A-3): sc-398844**, our highly recommended monoclonal alternatives to Smad2/3 (I-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Smad2/3 (C-8): sc-133098**.