

# Smad (C-17): sc-6030

## BACKGROUND

Smad proteins, the mammalian homologs of the *Drosophila* mothers against dpp (Mad) have been implicated as downstream effectors of TGF $\beta$ /BMP signaling. Smad1 (also designated Madr1 or JV4-1), Smad5 and mammalian Smad8 (also designated Smad9 or MadH6) are effectors of BMP2 and BMP4 function while Smad2 (also designated Madr2 or JV18-1) and Smad3 are involved in TGF $\beta$  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 $\beta$  signaling by interfering with TGF $\beta$ -mediated phosphorylation of other Smad family members.

## REFERENCES

1. Liu, F., et al. 1996. A human Mad protein acting as a BMP-regulated transcriptional activator. *Nature* 381: 620-623.
2. Eppert, K., et al. 1996. Madr2 maps to 18q21 and encodes a TGF $\beta$ -regulated Mad-related protein that is functionally encoded in colorectal carcinoma. *Cell* 86: 543-552.

## SOURCE

Smad (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Smad of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-6030 P, (100  $\mu$ 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-6030 X, 200  $\mu$ g/0.1 ml.

## APPLICATIONS

Smad (C-17) is recommended for detection of Smad1, Smad2, Smad3, Smad5 and Smad8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

Smad (C-17) is also recommended for detection of Smad1, Smad2, Smad3, Smad5 and Smad8 in additional species, including equine, canine, bovine, porcine and avian.

Smad (C-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

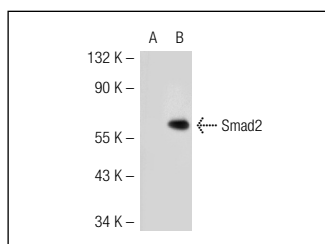
Molecular Weight of Smad: 61 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, ZR-75-1 cell lysate: sc-2241 or Smad2 (m): 293T Lysate: sc-123638.

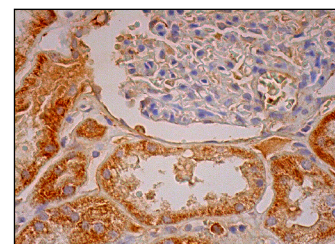
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Smad (C-17): sc-6030. Western blot analysis of Smad2 expression in non-transfected: sc-117752 (A) and mouse Smad2 transfected: sc-123638 (B) 293T whole cell lysates.



Smad (C-17): sc-6030. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomeruli and cells in tubules.

## SELECT PRODUCT CITATIONS

1. Lai, C., et al. 2000. Transforming growth factor- $\beta$  upregulates the  $\beta$ 5 Integrin subunit expression via Sp1 and Smad signaling. *J. Biol. Chem.* 275: 36400-36406.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.