

# Smad5 (T-13): sc-26419

## 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

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- Zhang, Y., et al. 1996. Receptor-associated Mad homologues synergize as effectors of the TGF $\beta$  response. *Nature* 383: 168-172.
- Lagna, G., et al. 1996. Partnership between DPC4 and Smad proteins in TGF $\beta$  signalling pathways. *Nature* 383: 832-836.
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- Chen, Y., et al. 1997. Smad8 mediates the signaling of the receptor serine kinase. *Proc. Natl. Acad. Sci. USA* 94: 12938-12943.
- Imamura, T., et al. 1997. Smad6 inhibits signalling by the TGF $\beta$  superfamily. *Nature* 389: 622-626.
- Heldin, C.H., Miyazono, K. and ten Dijke, P. 1997. TGF $\beta$  signalling from cell membrane to nucleus through SMAD proteins. *Nature* 390: 465-471.

## CHROMOSOMAL LOCATION

Genetic locus: SMAD5 (human) mapping to 5q31.1; Smad5 (mouse) mapping to 13 B1.

## SOURCE

Smad5 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Smad5 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-26419 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Smad5 (T-13) is recommended for detection of Smad5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Smad5 siRNA (h): sc-38378, Smad5 siRNA (m): sc-38379, Smad5 siRNA (r): sc-63290, Smad5 shRNA Plasmid (h): sc-38378-SH, Smad5 shRNA Plasmid (m): sc-38379-SH, Smad5 shRNA Plasmid (r): sc-63290-SH, Smad5 shRNA (h) Lentiviral Particles: sc-38378-V, Smad5 shRNA (m) Lentiviral Particles: sc-38379-V and Smad5 shRNA (r) Lentiviral Particles: sc-63290-V.

Smad5 (T-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Smad5: 52 kDa.

Positive Controls: DU 145 cell lysate: sc-2268, PC-3 cell lysate: sc-2220 or HeLa nuclear extract: sc-2120.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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<sup>™</sup> Mounting Medium: sc-24941.

## 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.


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Try **Smad5 (YY-6): sc-101151**, our highly recommended monoclonal alternative to Smad5 (T-13).