SANTA CRUZ BIOTECHNOLOGY, INC.

Smad8 (A-17): sc-30732

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The Power to Question

BACKGROUND

Smad proteins, the mammalian homologs of the *Drosophila* Mothers against dpp (Mad) have been implicated as downstream effectors of TGFβ/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 TGFβ 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/TGFβ signaling by interfering with TGFβ-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 at TGFβ-regulated Mad-related protein that is functionally encoded in colorectal carcinoma. Cell 86: 543-552.
3. Zhang, Y., et al. 1996. Receptor-associated Mad homologues synergize as effectors of the TGFβ response. Nature 383: 168-172.
4. Lagna, G., et al. 1996. Partnership between DPC4 and Smad proteins in TGFβ signalling pathways. Nature 383: 832-836.
5. Massague, J., et al. 1997. TGFβ signalling through the Smad pathway. Trends Cell Biol. 7: 187-192.
6. Chen, Y., et al. 1997. Smad8 mediates the signaling of the receptor serine kinase. Proc. Natl. Acad. Sci. USA 94: 12938-12943.
7. Imamura, T., et al. 1997. Smad6 inhibits signalling by the TGFβ superfamily. Nature 389: 622-626.
8. Heldin, C.H., et al. 1997. TGFβ signalling from cell membrane to nucleus through Smad proteins. Nature 390: 465-471.

CHROMOSOMAL LOCATION

Genetic locus: SMAD9 (human) mapping to 13q13.3; Smad9 (mouse) mapping to 3 C.

SOURCE

Smad8 (A-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Smad8 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-30732 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Smad8 (A-17) is recommended for detection of Smad8 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); non cross-reactive with Smad1 or Smad5.

Smad8 (A-17) is also recommended for detection of Smad8 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for Smad8 siRNA (h): sc-38382, Smad8 siRNA (m): sc-38383, Smad8 siRNA (r): sc-63291, Smad8 shRNA Plasmid (h): sc-38382-SH, Smad8 shRNA Plasmid (m): sc-38383-SH, Smad8 shRNA Plasmid (r): sc-63291-SH, Smad8 shRNA (h) Lentiviral Particles: sc-38382-V, Smad8 shRNA (m) Lentiviral Particles: sc-38383-V and Smad8 shRNA (r) Lentiviral Particles: sc-63291-V.

Molecular Weight of Smad8: 52 kDa.

Positive Controls: SK-N-MC nuclear extract: sc-2154.

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) 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.

SELECT PRODUCT CITATIONS

1. Masterson, J.C., et al. 2011. Bone morphogenetic protein signalling in airway epithelial cells during regeneration. Cell. Signal. 23: 398-406.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.