SANTA CRUZ BIOTECHNOLOGY, INC.

Smad3 (4C9): sc-517574

SANTA CRUZ BIOTECHNOLOGY

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 TGF-β response. Nature 383: 168-172.
4. Lagna, G., et al. 1996. Partnership between DPC4 and SMAD proteins in TGF-β signalling pathways. Nature 383: 832-836.
5. Massague, J., et al. 1997. TGF-β 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 TGF-β superfamily. Nature 389: 622-626.
8. Heldin, C.H., et al. 1997. TGF-β signalling from cell membrane to nucleus through Smad proteins. Nature 390: 465-471.
9. van Grunsven, L.A., et al. 2005. Smads and chromatin modulation. Cytokine Growth Factor Rev. 16: 495-512.

CHROMOSOMAL LOCATION

Genetic locus: SMAD3 (human) mapping to 15q22.33; Smad3 (mouse) mapping to 9 C.

SOURCE

Smad3 (4C9) is a mouse monoclonal antibody raised against Smad3 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and 1% glycerol.

PROTOCOLS

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

APPLICATIONS

Smad3 (4C9) is recommended for detection of Smad3 of mouse, rat and human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Smad3 siRNA (h): sc-38376, Smad3 siRNA (m): sc-38377, Smad3 siRNA (r): sc-77326, Smad3 shRNA Plasmid (h): sc-38376-SH, Smad3 shRNA Plasmid (m): sc-38377-SH, Smad3 shRNA Plasmid (r): sc-77326-SH, Smad3 shRNA (h) Lentiviral Particles: sc-38376-V, Smad3 shRNA (m) Lentiviral Particles: sc-38377-V and Smad3 shRNA (r) Lentiviral Particles: sc-77326-V.

Molecular Weight of Smad3: 54 kDa.

SELECT PRODUCT CITATIONS

1. Zhang, Y.Y., et al. 2021. Modulating oxidative stress counteracts specific antigen-induced regulatory T cell apoptosis in mice. Eur. J. Immunol. E-published.

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.