SANTA CRUZ BIOTECHNOLOGY, INC.

Smad8 (3E5): sc-293413

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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. Zhang, Y., et al. 1996. Receptor-associated Mad homologues synergize as effectors of the TGFβ response. Nature 383: 168-172.
3. Lagna, G., et al. 1996. Partnership between DPC4 and Smad proteins in TGFβ signalling pathways. Nature 383: 832-836.
4. 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.
5. Massaous, J. and Hata, A. 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 ALK-2 [corrected] 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.
9. van Grunsven, L.A., et al. 2005. Smads and chromatin modulation. Cytokine Growth Factor Rev. 16: 495-512.

CHROMOSOMAL LOCATION

Genetic locus: SMAD9 (human) mapping to 13q13.3.

SOURCE

Smad8 (3E5) is a mouse monoclonal antibody raised against amino acids 146-260 representing full length Smad8 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Smad8 (3E5) is recommended for detection of Smad8 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

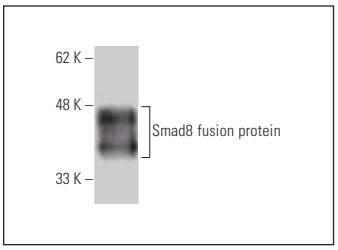
Suitable for use as control antibody for Smad8 siRNA (h): sc-38382, Smad8 shRNA Plasmid (h): sc-38382-SH and Smad8 shRNA (h) Lentiviral Particles: sc-38382-V.

Molecular Weight of Smad8: 52 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Smad8 (3E5): sc-293413. Western blot analysis of human recombinant Smad8 fusion protein.

SELECT PRODUCT CITATIONS

1. Fu, W., et al. 2020. Effect of microRNA-144-5p on the proliferation, invasion and migration of human umbilical vein endothelial cells by targeting SMAD1. Exp. Ther. Med. 19: 165-171.

RESEARCH USE

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

PROTOCOLS

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