

Smad3 (h): 293T Lysate: sc-116400

BACKGROUND

Smad proteins, the mammalian homologs of the *Drosophila* mothers against dpp (Mad) have been implicated as downstream effectors of TGF β /BMP signaling. Smad1 (also designated Madr1 or JV4-1), Smad5 and mammalian Smad8 (also designated Smad9 or MADH6) are effectors of BMP-2 and BMP-4 function while Smad2 (also designated Madr2 or JV18-1) and Smad3 are involved in TGF β 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 β signaling by interfering with TGF β -mediated phosphorylation of other Smad family members.

REFERENCES

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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. Massagué, 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.

CHROMOSOMAL LOCATION

Genetic locus: SMAD3 (human) mapping to 15q22.33.

PRODUCT

Smad3 (h): 293T Lysate represents a lysate of human Smad3 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

Smad3 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Smad3 antibodies. Recommended use: 10-20 μ l per lane.

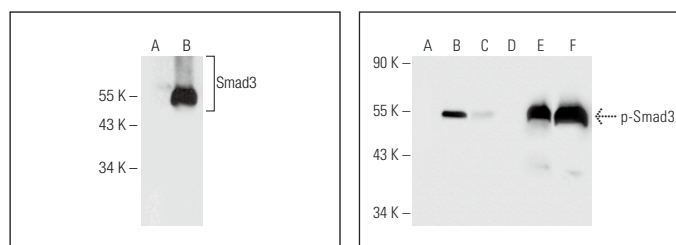
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Smad2/3 (E-1): sc-376928 is recommended as a positive control antibody for Western Blot analysis of enhanced human Smad3 expression in Smad3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



Smad2/3 (E-1): sc-376928. Western blot analysis of Smad3 expression in non-transfected: sc-117752 (A) and human Smad3 transfected: sc-116400 (B) 293T whole cell lysates.

Western blot analysis of Smad3 phosphorylation in non-transfected: sc-117752 (A, D), untreated human Smad3 transfected: sc-116400 (B, E) and lambda protein phosphatase treated human Smad3 transfected: sc-116400 (C, F) 293T whole cell lysates. Antibodies tested include p-Smad3 (Ser 208): sc-130218 (A, B, C) and Smad2/3 (FL-425): sc-8332 (D, E, F).

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.