

Smad3 (38-Q): sc-101154

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

- Liu, F., et al. 1996. A human Mad protein acting as a BMP-regulated transcriptional activator. *Nature* 381: 620-623.
- Lagna, G., et al. 1996. Partnership between DPC4 and SMAD proteins in TGF- β signalling pathways. *Nature* 383: 832-836.

CHROMOSOMAL LOCATION

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

SOURCE

Smad3 (38-Q) is a mouse monoclonal antibody raised against recombinant Smad3 of human origin.

PRODUCT

Each vial contains 50 μ g IgG_{2a} kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Smad3 (38-Q) is recommended for detection of Smad3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 Smad3 siRNA (h): sc-38376, Smad3 siRNA (m): sc-38377, Smad3 shRNA Plasmid (h): sc-38376-SH, Smad3 shRNA Plasmid (m): sc-38377-SH, Smad3 shRNA (h) Lentiviral Particles: sc-38376-V and Smad3 shRNA (m) Lentiviral Particles: sc-38377-V.

Molecular Weight of Smad3: 54 kDa.

Positive Controls: Smad3 (h): 293T Lysate: sc-116400 or HeLa whole cell lysate: sc-2200.

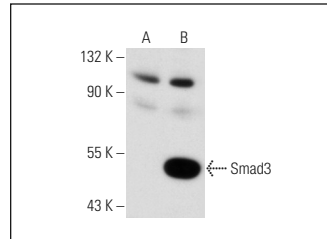
STORAGE

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

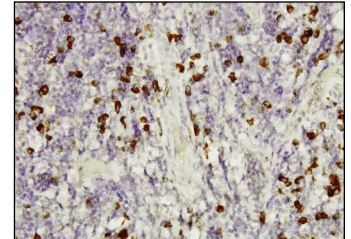
RESEARCH USE

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

DATA



Smad3 (38-Q): sc-101154. Western blot analysis of Smad3 expression in non-transfected: sc-117752 (A) and human Smad3 transfected: sc-116400 (B) 293T whole cell lysates.



Smad3 (38-Q): sc-101154. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human tonsil tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Kang, T.H., et al. 2006. Neuroprotective effects of the cyanidin-3-O- β -D-glucopyranoside isolated from mulberry fruit against cerebral ischemia. *Neurosci. Lett.* 391: 122-126.
- Palumbo-Zerr, K., et al. 2015. Orphan nuclear receptor NR4A1 regulates transforming growth factor- β signaling and fibrosis. *Nat. Med.* 21: 150-158.
- Yang, F., et al. 2015. Activated cytotoxic lymphocytes promote tumor progression by increasing the ability of 3LL tumor cells to mediate MDSC chemoattraction via Fas signaling. *Cell. Mol. Immunol.* 12: 66-76.
- Zhang, Y.Q., et al. 2015. Resveratrol ameliorates lipopolysaccharide-induced epithelial mesenchymal transition and pulmonary fibrosis through suppression of oxidative stress and transforming growth factor- β 1 signaling. *Clin. Nutr.* 34: 752-760.
- Yoon, J.H., et al. 2015. Phosphorylation status determines the opposing functions of Smad2/Smad3 as STAT3 cofactors in TH17 differentiation. *Nat. Commun.* 6: 7600.
- Wen, G., et al. 2015. A novel role of matrix metalloproteinase-8 in macrophage differentiation and polarization. *J. Biol. Chem.* 290: 19158-19172.
- Namachivayam, K., et al. 2015. All-*trans* retinoic acid induces TGF- β 2 in intestinal epithelial cells via RhoA- and p38 α MAPK-mediated activation of the transcription factor ATF2. *PLoS ONE* 10: e0134003.
- Kurundkar, A.R., et al. 2016. The matricellular protein CCN1 enhances TGF- β 1/SMAD3-dependent profibrotic signaling in fibroblasts and contributes to fibrogenic responses to lung injury. *FASEB J.* 30: 2135-2150.

CONJUGATES

See **Smad2/3 (C-8): sc-133098** for Smad2/3 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647.