

# Smad6 (D-4): sc-25321

## BACKGROUND

Smad proteins, the mammalian homologs of the *Drosophila* mothers against dpp (Mad) have been implicated as downstream effectors of TGF $\beta$ /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 TGF $\beta$  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 $\beta$  signaling by interfering with TGF $\beta$ -mediated phosphorylation of other Smad family members.

## CHROMOSOMAL LOCATION

Genetic locus: SMAD6 (human) mapping to 15q22.31; Smad6 (mouse) mapping to 9 C.

## SOURCE

Smad6 (D-4) is a mouse monoclonal antibody raised against amino acids 41-190 of Smad6 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\gamma$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-25321 X, 200  $\mu$ g/0.1 ml.

Smad6 (D-4) is available conjugated to agarose (sc-25321 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-25321 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25321 PE), fluorescein (sc-25321 FITC), Alexa Fluor<sup>®</sup> 488 (sc-25321 AF488), Alexa Fluor<sup>®</sup> 546 (sc-25321 AF546), Alexa Fluor<sup>®</sup> 594 (sc-25321 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-25321 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-25321 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-25321 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Smad6 (D-4) is recommended for detection of Smad6 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 Smad6 siRNA (h): sc-38380, Smad6 siRNA (m): sc-38381, Smad6 shRNA Plasmid (h): sc-38380-SH, Smad6 shRNA Plasmid (m): sc-38381-SH, Smad6 shRNA (h) Lentiviral Particles: sc-38380-V and Smad6 shRNA (m) Lentiviral Particles: sc-38381-V.

Smad6 (D-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

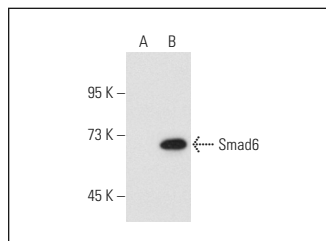
Molecular Weight of Smad6 isoforms: 54/36/26 kDa.

Positive Controls: Smad6 (m): 293T Lysate: sc-123643, Jurkat whole cell lysate: sc-2204 or A549 cell lysate: sc-2413.

## STORAGE

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

## DATA



Smad6 (D-4): sc-25321. Western blot analysis of Smad6 expression in non-transfected: sc-117752 (A) and mouse Smad6 transfected: sc-123643 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Acharya, S., et al. 2019. Mevalonate promotes differentiation of regulatory T cells. *J. Mol. Med.* 97: 927-936.
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- Liu, L., et al. 2021. A high level of IncFGD5-AS1 inhibits epithelial-to-mesenchymal transition by regulating the miR-196a-5p/Smad6/BMP axis in gastric cancer. *BMC Cancer* 21: 453.
- Gorbacheva, A.M., et al. 2021. EGR1 and RXRA transcription factors link TGF- $\beta$  pathway and CCL2 expression in triple negative breast cancer cells. *Sci. Rep.* 11: 14120.
- Sun, W., et al. 2021. Renoprotective effects of maslinic acid on experimental renal fibrosis in unilateral ureteral obstruction model via targeting MyD88. *Front. Pharmacol.* 12: 708575.
- Park, J.S., et al. 2021. Anti-fibrotic effect of 6-bromo-indirubin-3'-oxime (6-BIO) via regulation of activator protein-1 (AP-1) and specificity protein-1 (SP-1) transcription factors in kidney cells. *Biomed. Pharmacother.* 145: 112402.
- Sun, Z., et al. 2022. RNA demethylase ALKBH5 inhibits TGF- $\beta$ -induced EMT by regulating TGF- $\beta$ /SMAD signaling in non-small cell lung cancer. *FASEB J.* 36: e22283.
- Chiba, N., et al. 2022. EGR1 plays an important role in BMP9-mediated osteoblast differentiation by promoting SMAD1/5 phosphorylation. *FEBS Lett.* 596: 1720-1732.

## RESEARCH USE

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