SANTA CRUZ BIOTECHNOLOGY, INC.

Smad4 (N-16): sc-1908

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.

CHROMOSOMAL LOCATION

Genetic locus: SMAD4 (human) mapping to 18q21.2; Smad4 (mouse) mapping to 18 E2.

SOURCE

Smad4 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Smad4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1908 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-1908 X, 200 µg/0.1 ml.

APPLICATIONS

Smad4 (N-16) is recommended for detection of Smad4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Smad4 (N-16) is also recommended for detection of Smad4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Smad4 siRNA (h): sc-29484, Smad4 siRNA (m): sc-29485, Smad4 shRNA Plasmid (h): sc-29484-SH, Smad4 shRNA Plasmid (m): sc-29485-SH, Smad4 shRNA (h) Lentiviral Particles: sc-29484-V and Smad4 shRNA (m) Lentiviral Particles: sc-29485-V.

Smad4 (N-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Smad4: 61 kDa.

Positive Controls: Ramos cell lysate: sc-2216, NIH/3T3 whole cell lysate: sc-2210 or Hep G2 cell lysate: sc-2227.

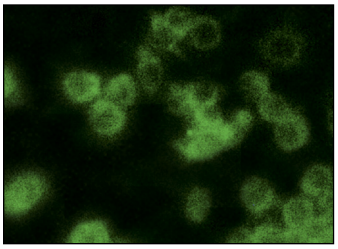
RESEARCH USE

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

STORAGE

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

DATA



Smad4 (N-16): sc-1908. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

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3. Fee, D.B., et al. 2004. Traumatic brain injury increases TGFβ RII expression on endothelial cells. Brain Res. 1012: 52-59.
4. Richter, A., et al. 2004. Impaired transforming growth factor-β signaling in idiopathic pulmonary arterial hypertension. Am. J. Respir. Crit. Care Med. 170: 1340-1348.
5. Sauer, B., et al. 2004. Involvement of Smad signaling in sphingosine 1-phosphate-mediated biological responses of keratinocytes. J. Biol. Chem. 279: 38471-38479.
6. Levy, L., et al. 2007. Arkadia activates Smad3/Smad4-dependent transcription by triggering signal-induced SnoN degradation. Mol. Cell. Biol. 27: 6068-6083.
7. Pommier, R.M., et al. 2012. The human NUPR1/P8 gene is transcriptionally activated by transforming growth factor β via the SMAD signalling pathway. Biochem. J. 445: 285-293.
8. Yan, X.Q., et al. 2013. Inactivation of Smad4 is a prognostic factor in intrahepatic cholangiocarcinoma. Chin. Med. J. 126: 3039-3043.