SANTA CRUZ BIOTECHNOLOGY, INC.

Smad7 (H-79): sc-11392

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: SMAD7 (human) mapping to 18q21.1; Smad7 (mouse) mapping to 18 E3.

SOURCE

Smad7 (H-79) is a rabbit polyclonal antibody raised against amino acids 319-397 of Smad7 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-11392 X, 200 µg/0.1 ml.

APPLICATIONS

Smad7 (H-79) is recommended for detection of Smad7 of mouse, rat and 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)], 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).

Smad7 (H-79) is also recommended for detection of Smad7 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Smad7 siRNA (h): sc-36508, Smad7 siRNA (m): sc-36509, Smad7 shRNA Plasmid (h): sc-36508-SH, Smad7 shRNA Plasmid (m): sc-36509-SH, Smad7 shRNA (h) Lentiviral Particles: sc-36508-V and Smad7 shRNA (m) Lentiviral Particles: sc-36509-V.

Smad7 (H-79) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Smad7: 46 kDa.

Positive Controls: A549 cell lysate: sc-2413, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

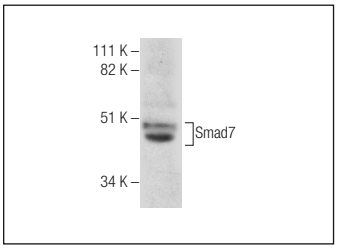
STORAGE

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

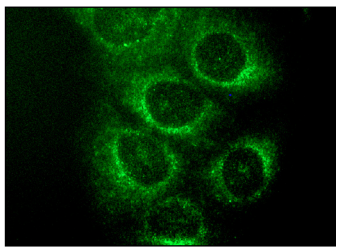
RESEARCH USE

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

DATA



Smad7 (H-79): sc-11392. Western blot analysis of Smad7 expression in HeLa whole cell lysate.



Smad7 (H-79): sc-11392. Immunofluorescence staining of methanol-fixed A549 cells showing perinuclear localization.

SELECT PRODUCT CITATIONS

1. Gronroos, E., et al. 2002. Control of Smad7 stability by competition between acetylation and ubiquitination. Mol. Cell 10: 483-493.
2. Qian, B.F., et al. 2008. Reduced responsiveness of HLA-B27 transgenic rat cells to TGF-β and IL-10-mediated regulation of IFN-γ production. Inflamm. Bowel Dis. 14: 921-930.
3. Artaza, J.N., et al. 2008. Myostatin promotes a fibrotic phenotypic switch in multipotent C3H/10T1/2 cells without affecting their differentiation into myofibroblasts. J. Endocrinol. 196: 235-249.
4. Gulubova, M., et al. 2010. Role of TGF-β1, its receptor TGFβRII, and Smad proteins in the progression of colorectal cancer. Int. J. Colorectal Dis. 25: 591-599.
5. Murakami, K., et al. 2010. Smurf1 ubiquitin ligase causes downregulation of BMP receptors and is induced in monocrotaline and hypoxia models of pulmonary arterial hypertension. Exp. Biol. Med. 235: 805-813.
6. Favreau, F., et al. 2010. Anti-thrombin therapy during warm ischemia and cold preservation prevents chronic kidney graft fibrosis in a DCD model. Am. J. Transplant. 10: 30-39.
7. Chiang, T.A., et al. 2010. Hyperosmolarity enhanced susceptibility to renal tubular fibrosis by modulating catabolism of type I transforming growth factor-β receptors. J. Cell. Biochem. 109: 663-671.
8. Wen, K.C., et al. 2012. Ixora parviflora protects against UVB-induced photoaging by inhibiting the expression of MMPs, MAP kinases, and COX-2 and by promoting type I procollagen synthesis. Evid. Based Complement. Alternat. Med. 2012: 417346.