

# Smad2/3 (E-20): sc-6033

## BACKGROUND

Smad proteins, the mammalian homologs of the *Drosophila* mothers against decapentaplegic (Mad), have been implicated as downstream effectors of TGF $\beta$ /BMP signaling. Smad1 (also designated Madr1 or JV4-1) and Smad5 are effectors of BMP-2 and BMP-4 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 proteins.

## CHROMOSOMAL LOCATION

Genetic locus: SMAD2 (human) mapping to 18q21.1, SMAD3 (human) mapping to 15q22.33; Smad2 (mouse) mapping to 18 E3, Smad3 (mouse) mapping to 9 C.

## SOURCE

Smad2/3 (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Smad3 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6033 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Smad2/3 (E-20) is recommended for detection of Smad2 and Smad3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Smad2/3 (E-20) is also recommended for detection of Smad2 and Smad3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Smad2/3 siRNA (h): sc-37238, Smad2/3 siRNA (m): sc-37239, Smad2/3 shRNA Plasmid (h): sc-37238-SH, Smad2/3 shRNA Plasmid (m): sc-37239-SH, Smad2/3 shRNA (h) Lentiviral Particles: sc-37238-V and Smad2/3 shRNA (m) Lentiviral Particles: sc-37239-V.

Smad2/3 (E-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Smad2/3: 55-60 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Smad2 (m): 293T Lysate: sc-123638 or U-937 cell lysate: sc-2239.

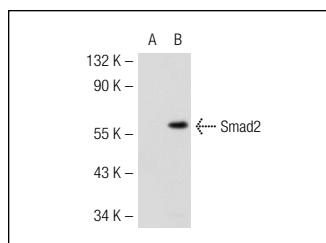
## STORAGE

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

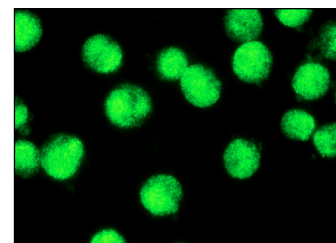
## RESEARCH USE

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

## DATA



Smad2/3 (E-20): sc-6033. Western blot analysis of Smad2 expression in non-transfected: sc-117752 (A) and mouse Smad2 transfected: sc-123638 (B) 293T whole cell lysates.



Smad2/3 (E-20): sc-6033. Immunofluorescence staining of methanol-fixed U-937 cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

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- Xie, J.J., et al. 2010. Involvement of CYR61 and CTGF in the fascin-mediated proliferation and invasiveness of esophageal squamous cell carcinomas cells. *Am. J. Pathol.* 176: 939-951.
- Zheng, Y., et al. 2010. Tgfbeta signaling directly induces Arf promoter remodeling by a mechanism involving Smads 2/3 and p38 MAPK. *J. Biol. Chem.* 285: 35654-35664.
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- Ungefroren, H., et al. 2011. The Src family kinase inhibitors PP2 and PP1 block TGF- $\beta$ 1-mediated cellular responses by direct and differential inhibition of type I and type II TGF- $\beta$  receptors. *Curr. Cancer Drug Targets* 11: 524-535.
- Jang, M.J., et al. 2011. UCH-L1 promotes cancer metastasis in prostate cancer cells through EMT induction. *Cancer Lett.* 302: 128-135.



Try **Smad2/3 (C-8): sc-133098** or **Smad2/3 (A-3): sc-398844**, our highly recommended monoclonal alternatives to Smad2/3 (E-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Smad2/3 (C-8): sc-133098**.