

## Smad8 (S-20): sc-7442

### 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: SMAD9 (human) mapping to 13q13.3; Smad9 (mouse) mapping to 3 C.

### SOURCE

Smad8 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Smad8 of rat 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-7442 P, (100  $\mu$ g 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-7442 X, 200  $\mu$ g/0.1 ml.

### APPLICATIONS

Smad8 (S-20) is recommended for detection of Smad8 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); non cross-reactive with Smad1 or Smad5.

Smad8 (S-20) is also recommended for detection of Smad8 in additional species, including equine and canine.

Suitable for use as control antibody for Smad8 siRNA (h): sc-38382, Smad8 siRNA (m): sc-38383, Smad8 siRNA (r): sc-63291, Smad8 shRNA Plasmid (h): sc-38382-SH, Smad8 shRNA Plasmid (m): sc-38383-SH, Smad8 shRNA Plasmid (r): sc-63291-SH, Smad8 shRNA (h) Lentiviral Particles: sc-38382-V, Smad8 shRNA (m) Lentiviral Particles: sc-38383-V and Smad8 shRNA (r) Lentiviral Particles: sc-63291-V.

Smad8 (S-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Smad8: 52 kDa.

Positive Controls: SK-N-MC nuclear extract: sc-2154.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### SELECT PRODUCT CITATIONS

- Bau, B., et al. 2002. Bone morphogenetic protein-mediating receptor-associated Smads as well as common Smad are expressed in human articular chondrocytes but not upregulated or downregulated in osteoarthritic cartilage. *J. Bone Mineral Res.* 17: 2141-2150.
- Oxburgh, L., et al. 2002. Dynamic regulation of Smad expression during mesenchyme to epithelium transition in the metanephric kidney. *Mech. Dev.* 112: 207-211.
- Pellegrini, M., et al. 2003. Developmental expression of BMP4/ALK3/Smad5 signaling pathway in the mouse testis: a potential role of BMP4 in spermatogonia differentiation. *J. Cell Sci.* 116: 3363-3372.
- Ellsworth, B.S., et al. 2003. The gonadotropin releasing hormone (GnRH) receptor activating sequence (GRAS) is a composite regulatory element that interacts with multiple classes of transcription factors including Smads, AP-1 and a forkhead DNA binding protein. *Mol. Cell. Endocrinol.* 206: 93-111.
- Gosset, F.P., et al. 2007. BMP2 and BMP6 control p57<sup>Kip2</sup> expression and cell growth arrest/terminal differentiation in normal primary human epidermal keratinocytes. *Cell. Signal.* 19: 731-739.

### 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.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Smad8 (3E5): sc-293413**, our highly recommended monoclonal alternative to Smad8 (S-20).