

anti-Smad1

Cat #: HM1335
Mouse monoclonal IgG
0.2 µg/µl, store at 4 °C

For research use only

BACKGROUND

Smad proteins are mammalian homologs of the gene products of the *Drosophila* gene 'mothers against decapentaplegic' (Mad) and the *C. elegans* gene Sma. Smad proteins are signal transducers and transcriptional modulators that mediate TGFβ/BMP signaling pathways, which are involved in a range of biological activities including cell growth, apoptosis, morphogenesis, development and immune responses. Smad1 (also designated Madr1 or JV4), 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. In response to BMP ligands, Smad1 can be phosphorylated and activated by the BMP receptor kinase. The phosphorylated form of Smad1 forms a complex with SMAD4, which is important for its function in the transcription regulation. Smad1 is a target for SMAD-specific E3 ubiquitin ligases, such as SMURF1 and SMURF2, and undergoes ubiquitination and proteasome-mediated degradation.

SPECIFICITY

This antibody broadly reacts with Smad1, Smad2, Smad3, Smad5 and Smad8 of mouse, rat and human origin by Western blotting, immunoprecipitation and immunohistochemistry (including paraffin-embedded sections).

IMMUNOGEN

Full-length recombinant human Smad 1 protein.

STORAGE

This antibody is stable for 12 months when stored at 2-8°C.

REFERENCES

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