

## Product datasheet for **CF507240**

### SMAD1 Mouse Monoclonal Antibody [Clone ID: OTI2D2]

#### Product data:

|                         |  |
|-------------------------|--|
| Product Type:           | Primary Antibodies   |
| Clone Name:             | OTI2D2   |
| Applications:           | IHC, WB  |
| Recommended Dilution:   | WB 1:4000, IHC 1:150   |
| Reactivity:             | Human, Mouse, Rat  |
| Host:                   | Mouse  |
| Isotype:                | IgG1   |
| Clonality:              | Monoclonal   |
| Immunogen:              | Full length human recombinant protein of human SMAD1(NP_001003688) produced in HEK293T cell.   |
| Formulation:            | Lyophilized powder (original buffer 1X PBS, pH 7.3, 8% trehalose)  |
| Reconstitution Method:  | For reconstitution, we recommend adding 100uL distilled water to a final antibody concentration of about 1 mg/mL. To use this carrier-free antibody for conjugation experiment, we strongly recommend performing another round of desalting process. (OriGene recommends Zeba Spin Desalting Columns, 7KMWCO from Thermo Scientific) |
| Purification:           | Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)  |
| Conjugation:            | Unconjugated   |
| Storage:                | Store at -20°C as received.  |
| Stability:              | Stable for 12 months from date of receipt.   |
| Predicted Protein Size: | 52.1 kDa   |
| Gene Name:              | SMAD family member 1   |
| Database Link:          | <a href="#">NP_001003688</a><br><a href="#">Entrez Gene 17125 Mouse</a> <a href="#">Entrez Gene 25671 Rat</a> <a href="#">Entrez Gene 4086 Human</a><br><a href="#">Q15797</a>   |



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**Background:**

The protein encoded by this gene belongs to the SMAD, a family of proteins similar to 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 multiple signaling pathways. This protein mediates the signals of the bone morphogenetic proteins (BMPs), which are involved in a range of biological activities including cell growth, apoptosis, morphogenesis, development and immune responses. In response to BMP ligands, this protein can be phosphorylated and activated by the BMP receptor kinase. The phosphorylated form of this protein forms a complex with SMAD4, which is important for its function in the transcription regulation. This protein is a target for SMAD-specific E3 ubiquitin ligases, such as SMURF1 and SMURF2, and undergoes ubiquitination and proteasome-mediated degradation. Alternatively spliced transcript variants encoding the same protein have been observed. [provided by RefSeq, Jul 2008]

**Synonyms:**

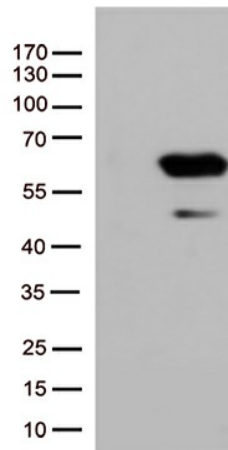
BSP-1; BSP1; JV4-1; JV41; MADH1; MADR1

**Protein Families:**

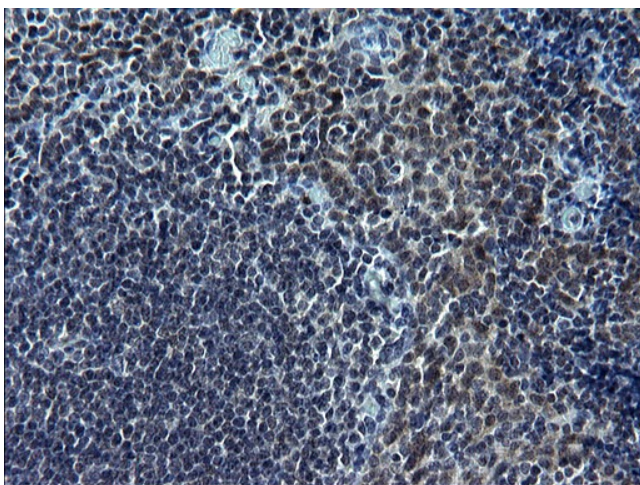
Cancer stem cells, Druggable Genome, ES Cell Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGF $\beta$ /BMP signaling pathway, Transcription Factors

**Protein Pathways:**

TGF-beta signaling pathway

**Product images:**

HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY SMAD1 ([RC223918], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SMAD1 (1:500).



Immunohistochemical staining of paraffin-embedded Human lymph node tissue within the normal limits using anti-SMAD1 mouse monoclonal antibody. Heat-induced epitope retrieval by EDTA solution buffer pH 8.0 at 120°C for 3 min.