

## Product datasheet for **AR09188PU-N**

### SMAD2 (1-467, His-tag) Human Protein

#### Product data:

|                                       |  |
|---------------------------------------|--|
| Product Type:                         | Recombinant Proteins   |
| Description:                          | SMAD2 (1-467, His-tag) human recombinant protein, 0.1 mg   |
| Species:                              | Human  |
| Expression Host:                      | E. coli  |
| Expression cDNA Clone or AA Sequence: | <u>MGSSHHHHHH SSGLVPRGSH</u> MSSILPFTPP VVKRLLGWKK SAGGSGGAGG GEQNGQEEKW CEKAVKSLVK KLKKTGRLDE LEKAITTQNC NTKCVTIPST CSEIWGLSTP NTIDQWDTTG LYSFSEQTRS LDGRLQVSHR KGLPHVIYCR LWRWPDLSH HELKAIENCE YAFNLKKDEV CVNPYHYQVR ETPVLPPVLV PRHTEILTEL PPLDDYTHSI PENTNFPAGI EPQSNYIPET PPPGYISEDG ETSDQQLNQS MDTGSPAELS PTTLSPVNHS LDLQPVTYSE PAFWCSIAYY ELNQRVGETF HASQPSTLVD GFTDPSNSER FCLGLLSNVN RNATVEMTRR HIGRQVRLYY IGGEVFAECL SDSAIFVQSP NCNQRYGWHP ATVCKIPPGC NLKIFNNQEF AALLAQSVNQ GFEAVYQLTR MCTIRMSFVK GWGAEYRRQT VTSTPCWIEL HLNGPLQWLD KVLTMGSPS VRCSSMS |
| Tag:                                  | His-tag  |
| Predicted MW:                         | 54.4 kDa   |
| Concentration:                        | lot specific   |
| Purity:                               | >95% by SDS - PAGE   |
| Buffer:                               | Presentation State: Purified<br>State: Liquid purified protein<br>Buffer System: 20 mM Tris-HCl buffer (pH 8.0) containing 0.1M NaCl, 20% glycerol   |
| Preparation:                          | Liquid purified protein  |
| Protein Description:                  | Recombinant SMAD2 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.   |
| Storage:                              | Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer. Avoid repeated freezing and thawing.   |
| Stability:                            | Shelf life: one year from despatch.  |
| RefSeq:                               | <u>NP_001003652</u>  |
| Locus ID:                             | 4087   |
| UniProt ID:                           | <u>Q15796</u>  |



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| <b>Cytogenetics:</b>     | 18q21.1  |
| <b>Synonyms:</b>         | SMAD family member 2, SMAD-2, SMAD 2, MADH2, MAD homolog 2, MADR2, Mad-related protein 2, JV18-1   |
| <b>Summary:</b>          | <p>The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the <i>Drosophila</i> gene 'mothers against decapentaplegic' (Mad) and the <i>C. elegans</i> gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. This protein is recruited to the TGF-beta receptors through its interaction with the SMAD anchor for receptor activation (SARA) protein. In response to TGF-beta signal, this protein is phosphorylated by the TGF-beta receptors. The phosphorylation induces the dissociation of this protein with SARA and the association with the family member SMAD4. The association with SMAD4 is important for the translocation of this protein into the nucleus, where it binds to target promoters and forms a transcription repressor complex with other cofactors. This protein can also be phosphorylated by activin type 1 receptor kinase, and mediates the signal from the activin. Alternatively spliced transcript variants have been observed for this gene. [provided by RefSeq, May 2012]</p> |
| <b>Protein Families:</b> | Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGFb/BMP signaling pathway, Transcription Factors  |
| <b>Protein Pathways:</b> | Adherens junction, Cell cycle, Colorectal cancer, Pancreatic cancer, Pathways in cancer, TGF-beta signaling pathway, Wnt signaling pathway   |

**Product images:**