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Product datasheet for SC116433

SMAD1 (NM_005900) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMAD1 (NM_005900) Human Untagged Clone
Tag:	Tag Free
Symbol:	SMAD1
Synonyms:	BSP-1; BSP1; JV4-1; JV41; MADH1; MADR1
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

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Fully Sequenced ORF:

>OriGene sequence for NM_005900 edited
GAATTCGGCACGAGGGGCGGGCGGGCGGAGAAAGGAGAGGCCGAGCGGCTCAACCCGGGC
CGAGGCTCGGGGAGCGGAGAGTGGCGCAGCGCCCGGCCGTCCGGACCCGGGCCGCGAGAC
CCCGCTCGCCCGGCCACTCGTGCTCCCGCACGGACGGGCGCGCCGCCAACCCGGTGCTGA
CTGGGTTACTTTTTTAAACACTAGGAATGGTAATTTCTACTCTTCTGGACTTCAAACTAA
GAAGTTAAAGAGACTTCTCTGTAAATAAACAAATCTCTTCTGCTGTCCTTTTGCATTTGG
AGACAGCTTTATTTCACCATATCCAAGGAGTATAACTAGTGCTGTCATTATGAATGTGAC
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TGAAGAAGAAAAATGGGCAGAGAAAGCTGTTGATGCTTTGGTGAAAAAACTGAAGAAAAA
GAAAGGTGCCATGGAGGAACTGGAAAAGGCCTTGAGCTGCCCAGGGCAACCGAGTAACTG
TGTCACCATTCCCCGCTCTCTGGATGGCAGGCTGCAAGTCTCCCACCGGAAGGGACTGCC
TCATGTCATTTACTGCCGTGTGTGGCGCTGGCCCGATCTTCAGAGCCACCATGAACTAAA
ACCACTGGAATGCTGTGAGTTTCCTTTTGGTTCCAAGCAGAAGGAGGTCTGCATCAATCC
CTACCACTATAAGAGAGTAGAAAGCCCTGTACTTCCTCCTGTGCTGGTTCCAAGACACAG
CGAATATAATCCTCAGCACAGCCTCTTAGCTCAGTTCCGTAACTTAGGACAAAATGAGCC
TCACATGCCACTCAACGCCACTTTTCCAGATTCTTTCCAGCAACCCAACAGCCACCCGTT
TCCTCACTCTCCCAATAGCAGTTACCCAAACTCTCCTGGGAGCAGCAGCAGCACCTACCC
TCACTCTCCCACCAGCTCAGACCCAGGAAGCCCTTTCCAGATGCCAGCTGATACGCCCCC
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AAACATGATGGCGCCTCCCCTGCCCTCAGAAATCAACAGAGGAGATGTTCAGGCGGTTGC
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CAATAAGAACCGTTTCTGCCTTGGGCTGCTCTCCAATGTTAACCGGAATTCCACTATTGA
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TGCCGAATGCCTTAGTGACAGTAGCATCTTTGTGCAAAGTCGGAACTGCAACTACCATCA
TGGATTTCATCCTACTACTGTTTGCAAGATCCCTAGTGGGTGTAGTCTGAAAATTTTTAA
CAACCAAGAATTTGCTCAGTTATTGGCACAGTCTGTGAACCATGGATTTGAGACAGTCTA
TGAGCTTACAAAAATGTGTACTATACGTATGAGCTTTGTGAAGGGCTGGGGAGCAGAATA
CCACCGCCAGGATGTTACTAGCACCCCCTGCTGGATTGAGATACATCTGCACGGCCCCCT
CCAGTGGCTGGATAAAGTTCTTACTCAAATGGGTTCACCTCATAATCCTATTTCATCTGT
ATCTTAAATGGCCCCAGGCATCTGCCTCTGGAAAACTATTGAGCCTTGCATGTACTTGAA
GGATGGATGAGTCAGATACGATTGAGAACTGACAAAGGAGCCTTGATAATACTTGACCTC
TGTGACCAACTGTTGGATTCAGAAATTTAAACAAAAAAAAAAAAAAAAAAACTCGAC

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_005900 unedited
GTGTTCGAATATTTGTATACGACTCACTATAGGGCGGCCGCGNAATCGGCACGAGGGGCG
GGCGGGCGGAGAAAGGAGAGGCCGAGCGGCTCAACCCGGGCCGAGGCTCGGGGAGCGGAG
AGTGGCGCAGCGCCCGGCCGTCCGGACCCGGGCCGCGAGACCCCGCTCGCCCGGCCACTC
GTGCTCCCGCACGGACGGGCGCGCCGCCAACCCGGTGCTGACTGGGTTACTTTTTTAAAC
ACTAGGAATGGTAATTTCTACTCTTCTGGACTTCAAACTAAGAAGTTAAAGAGACTTCTC
TGTAAATAAACAAATCTCTTCTGCTGTCCTTTTGCATTTGGAGACAGCTTTATTTCACCA
TATCCAAGGAGTATAACTAGTGCTGTCATTATGAATGTGACAAGTTTATTTTCCTTTACA
AGTCCAGCTGTGAAGAGACTTCTTGGGTGGAAACAGGGCGATGAAGAAGAAAAATGGGCA
GAGAAAGCTGTTGATGCTTTGGTGAAAAAACTGAAGAAAAAGAAAGGTGCCATGGAGGAA
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CTGGATGGCAGGCTGCAAGTCTCCCACCGGAAGGGACTGCCTCATGTCATTTACTGCCGT
GTGTGGCGCTGGCCCGATCTTCAGAGCCACCATGAACTAAAACCACTGGGATGCTGTGAG
TTTCCTTTTGGTTCCAAGCAGAAAGAGGTCTGCATCAATCCCTACCACTATAAGAGAGTA
GAAAGCCCTGTACTTCCTCCTGTGCTGGGTCCAAGACACAGCGAATATAATCCTCAGCAC
AGCCTCTTAGCTCAGGTTCCGTAACTTAGGACAAAAAGAGCCTCACATGGCACTCCACGC
CACTTTTCCAGATTTTTTCAGC

3' Read Nucleotide Sequence:

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>OriGene 3' read for NM_005900 unedited
GCGGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTGTTTAAATTTCTGAATCCA
ACAGTTGGTCACAGAGGTCAAGTATTATCAAGGCTCCTTTGTCAGTTCTCAATCGTATCT
GACTCATCCATCCTTCAAGTACATGCAAGGCTCAATAGTTTTCCAGAGGCAGATGCCTGG
GGCCATTTAAGATACAGATGAAATAGGATTATGAGGTGAACCCATTTGAGTAAGAACTTT
ATCCAGCCACTGGAGGGGGCCGTGCAGATGTATCTCAATCCAGCAGGGGGTGCTAGTAAC
ATCCTGGCGGTGGTATTCTGCTCCCCAGCCCTTCACAAAGCTCATACGTATAGTACACAT
TTTTGTAAGCTCATAGACTGTCTCAAATCCATGGTTCACAGACTGTGCCAATAACTGAGC
AAATTCTTGGTTGTTAAAAATTTTCAGACTACACCCACTAGGGATCTTGCAAACAGTAGT
AGGATGAAATCCATGATGGTAGTTGCAGTTCCGACTTTGCACAAAGATGCTACTGTCACT
AAGGCATTCGGCATACACCTCCCCTCCAACATAATAAAGATGAACTCCTTTTCCAATATG
CCGNCTGGTGTTTTCATAGTGGAATTCCGGTTAACATTGGAGAGCAGCCCAAGGCAGAAA
CGGTTCCTATTGTTGGGAAGGATCAGTGAAACCATTCACCCACACACTTGTGGAGGAAGC
ATGAAACGCTTCCCCCCACGATTGTTGACCTCATATAGACATTAAACACCAGTGTTTTGG
TTCCTTATTAACAACCGGCTGAACATTTCCTCTGTTGATTTCTGAGGCCAAGGGAGGGCC
CATCATGGTTTGGGTCCCTCGGCTGAGACCCTACCTGGGTCATGGGGCTCTTTAGAAGGC
AGGAACCAGGGTGGGGGCGTTTCACCCTGCCTTCTGGAAGGG
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Restriction Sites: NotI-NotI

ACCN: NM_005900

Insert Size: 2000 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: NM_005900.2, NP_005891.1

RefSeq Size: 3056 bp

RefSeq ORF: 1398 bp

Locus ID: 4086

UniProt ID: Q15797

Cytogenetics: 4q31.21

Domains: DWB, DWA, MH1

Protein Families:	Cancer stem cells, Druggable Genome, ES Cell Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGFb/BMP signaling pathway, Transcription Factors
Protein Pathways:	TGF-beta signaling pathway
Gene Summary:	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] Transcript Variant: This variant (1) differs in the 5' UTR compared to variant 3. All eight variants encode the same protein.