

Product datasheet for **RC223918**

SMAD1 (NM_005900) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMAD1 (NM_005900) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SMAD1
Synonyms:	BSP-1; BSP1; JV4-1; JV41; MADH1; MADR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC223918 representing NM_005900
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGAATGTGACAAGTTTATTTTCCTTTACAAGTCCAGCTGTGAAGAGACTTCTTGGGTGGAAACAGGGCG
 ATGAAGAAGAAAAATGGGCAGAGAAAGCTGTTGATGCTTTGGTGAAAAAACTGAAGAAAAAGAAAGGTGC
 CATGGAGGAAGTGGAAAAAGCCTTGAGCTGCCAGGGCAACCGAGTAAGTGTGTACCATTCCCCCGTCT
 CTGGATGGCAGGCTGCAAGTCTCCACCGGAAGGGACTGCCTCATGTCTTTACTGCCGTGTGTGGCGCT
 GGCCCGATCTTCAGAGCCACCATGAAGTAAAACCACTGGAATGCTGTGAGTTTCTTTTGGTTCCAAGCA
 GAAGGAGGTCTGCATCAATCCCTACCCTATAAGAGAGTAGAAAGCCCTGTACTTCTCTGTGTGCTGTT
 CCAAGACACAGCGAATAATCCTCAGCACAGCCTTTAGCTCAGTTCGGTAAGTACTGACAAAATGAGC
 CTCACATGCCACTCAACGCCACTTTTCCAGATTCTTCCAGCAACCCAACAGCCACCCGTTTCTCACTC
 TCCAATAGCAGTACCCAAACTCTCTGGGAGCAGCAGCAGCACCTACCCTCACTCTCCACAGCTCA
 GACCCAGGAAGCCCTTCCAGATGCCAGCTGATACGCCCCACCTGCTTACCTGCCTCCTGAAGACCCCA
 TGACCCAGGATGGCTCTCAGCCGATGGACACAAACATGATGGCGCCTCCCTGCCCTCAGAAATCAACAG
 AGGAGATGTTCAGGCGGTTGCTTATGAGGAACCAAAACTGGTGTCTATTGTCTACTATGAGCTCAAC
 AATCGTGTGGGTGAAGCGTTCCATGCCTCCTCCACAAGTGTGTTGGTGGATGGTTTCACTGATCCTTCCA
 ACAATAAGAACCCTTCTGCCTTGGGCTGCTCTCAATGTTAACCAGAAATCCACTATTGAAAACACCAG
 GCGGCATATTGAAAAGGAGTTCATCTTTATATGTTGGAGGGGAGGTGTATGCCGAATGCCTTAGTGAC
 AGTAGCATCTTTGTGCAAAGTCGGAAGTCAACTACCATCATGGATTTCACTACTGTTTGAAGA
 TCCCTAGTGGGTGTAGTCTGAAAATTTTAAACAACCAAGAATTTGCTCAGTTATTGGCACAGCTCTGTGAA
 CCATGGATTTGAGACAGTCTATGAGCTTACAAAATGTGTACTATACGTATGAGCTTTGTGAAGGGCTGG
 GGAGCAGAATACCACCGCAGGATGTTACTAGCACCCCTGCTGGATTGAGATACATCTGCACGGCCCC
 TCCAGTGGCTGGATAAAGTTCTTACTCAATGGGTTACCTCATAATCTATTTCATCTGTATCT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC223918 representing NM_005900
 Red=Cloning site Green=Tags(s)

MNVTSLFSFTSPAVKRLLGWKQGDEEEKWAEKAVDALVKLKKKKGAMEELEKALSCPGQPSNCVTIPRS
 LDGRLQVSHRGLPHVIYCRVWRWPDLSHHEKPLECCEFPFGSKQKEVCINPYHYKRVEPVLPVVLV
 PRHSEYNPQHSLLAQFRNLGQNEPHMPLNATFPDSFQPNSHPPHSPNSSYPNSPGSSSTYPHSPTSS
 DPGSPFQMPADTPPPAYLPPEDPMTQDGSQPMNTNMMAPPLPSEINRGDVQAVAYEEPKHWCISIVYELN
 NRVGEAFHASSTSVLVDGFTDPSNNKNRFLGLLSNVNRNSTIENRRRIGKGVHLYYVGGEVYAECLSD
 SSIFVQSRNCNYHHGFHPTTVCKIPSGCSLKIIFNNQEFQLLAQSVNHGFETVYELTKMCTIRMSFVKGW
 GAEYHRQDVTSTPCWIEIHLHGPLQWLDKVLTMGSPHNPISVS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6271_d07.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_005900

ORF Size: 1395 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_005900.3](#)

RefSeq Size: 3056 bp

RefSeq ORF: 1398 bp

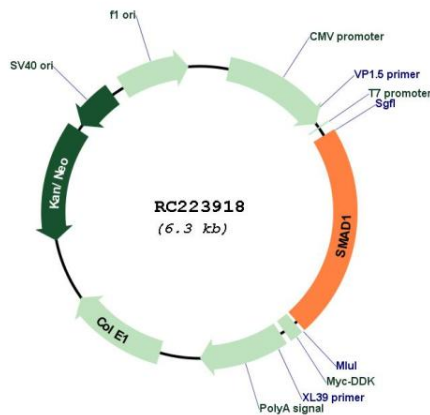
Locus ID: 4086

UniProt ID: [Q15797](#)

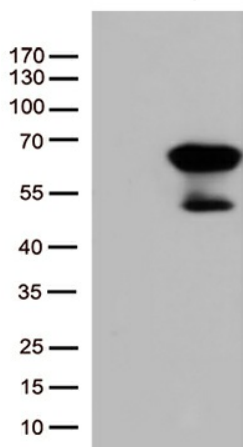
Cytogenetics: 4q31.21

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
MW:	52.1 kDa
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]

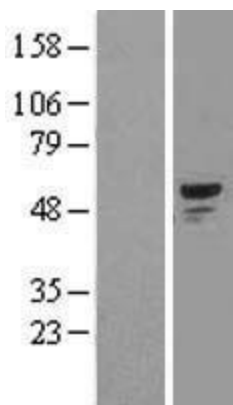
Product images:



Circular map for RC223918



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SMAD1 (Cat# 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 (Cat# [TA507245])(1:500).



Western blot validation of overexpression lysate (Cat# [LY416996]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223918 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).