

## Product datasheet for **RC201828**

### SMAD4 (NM\_005359) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SMAD4 (NM_005359) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SMAD4
Synonyms:	DPC4; JIP; MADH4; MYHRS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC201828 representing NM\_005359  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGACAATATGTCTATTACGAATACACCAACAAGTAATGATGCCTGTCTGAGCATTGTGCATAGTTTGA  
 TGTGCCATAGACAAGGTGGAGAGAGTGAACATTTGCAAAAAGAGCAATTGAAAGTTGGTAAAGAAGCT  
 GAAGGAGAAAAAGATGAATTGGATTCTTTAATAACAGCTATAACTACAAATGGAGCTCATCCTAGTAAA  
 TGTGTTACCATACAGAGAACATTGGATGGGAGGCTTCAGGTGGCTGGTCGGAAAGGATTTCTCATGTGA  
 TCTATGCCCGTCTCTGGAGGTGGCTGATCTTCACAAAAATGAACTAAAACATGTTAAATATTGTGAGTA  
 TGCGTTTGACTTAAAATGTGATAGTGTCTGTGTAATCCATATCACTACGAACGAGTTGTATCACCTGGA  
 ATTGATCTCTCAGGATTAACACTGCAGAGTAATGCTCCATCAAGTATGATGGTGAAGGATGAATATGTGC  
 ATGACTTTGAGGGACAGCCATCGTTGTCCACTGAAGGACATTCAATTCAAACCATCCAGCATCCACCAAG  
 TAATCGTGCATCGACAGAGACATACAGCACCCAGCTCTGTTAGCCCATCTGAGTCTAATGCTACCAGC  
 ACTGCCAACTTTCCCAACATTCTGTGGCTTCCACAAGTCAGCCTGCCAGTATACTGGGGGGCAGCCATA  
 GTGAAGGACTGTTGCAGATAGCATCAGGGCCTCAGCCAGGACAGCAGCAGAATGGATTTACTGGTCAGCC  
 AGCTACTTACCATCATAACAGCACTACCACCTGGACTGGAAGTAGGACTGCACCATACACACCTAATTTG  
 CCTCACCACAAAACGGCCATCTTCAGCACCACCCGCCTATGCCGCCCATCCCGGACATTACTGGCCTG  
 TTCACAATGAGCTTGCAATCCAGCCTCCATTTCCAATCATCTGCTCCTGAGTATTGGTGTTCATTGC  
 TTACTTTGAAATGGATGTTCCAGGTAGGAGAGACATTTAAGGTTCTTCAAGCTGCCCTATTGTTACTGTT  
 GATGGATACGTGGACCCTTCTGGAGGAGATCGCTTTTGTGGTCAACTCTCCAATGTCACAGGACAG  
 AAGCCATTGAGAGAGCAAGGTTGCACATAGGCAAGGTGTGCAGTTGGAATGTAAGGTGAAGGTGATGT  
 TTGGGTACAGGTGCCTTAGTGACCACGCGTCTTTGTACAGAGTTACTACTTAGACAGAGAAGCTGGGCGT  
 GCACCTGGAGATGCTGTTCATAAGATCTACCCAAGTGCATATATAAAGGTCTTTGATTTGCGTCAGTGTC  
 ATCGACAGATGCAGCAGCAGCGGCTACTGCACAAGCTGCAGCAGCTGCCAGGCAGCAGCCGTGGCAGG  
 AAACATCCCTGGCCAGGATCAGTAGGTGGAATAGCTCCAGCTATCAGTCTGTCAGCTGCTGCTGGAATT  
 GGTGTTGATGACCTTCGTCGCTTATGCATACTCAGGATGAGTTTTGTGAAAGGCTGGGGACCGGATTACC  
 CAAGACAGAGCATCAAAGAAACACCTTGTCTGGATTGAAATTCACTTACACCGGGCCCTCCAGCTCCTAGA  
 CGAAGTACTTCATACCATGCCGATTGCAGACCCACAACCTTTAGAC

**ACGCGT**ACGCGGCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC201828 representing NM\_005359  
 Red=Cloning site Green=Tags(s)

MDNMSITNPTSNDACLIVHSLMCHRQGESETFAKRAIESLVKCLKKDELDSLITAITTNGAHPK  
 CVTIQRDLGRLQVAGRKGFPHYIYARLWRPDLHKNELKHVKYCYAFDLKCDSSVCNPNYHYERVVSPG  
 IDLSGLTLQSNAPSSMMVKDEYVHDFEGQPSLSTEGHSIQTIQHPPSNRASTETYSTPALLAPSESNA  
 TANFPNIPVASTSQPASILGGSHSEGLLQIASGPQPGQQNGFTGQPATYHHNSTTTWTGSRTPYTPNL  
 PHHQNGHLQHPPMPHPGHYWPVHNELAFQPPISNHPAPEYWCIAFYFEMDVQVGETFKVPSSCPIVTV  
 DGYVDPSSGDRFCLGQLSNVHRTEAIERARLHIGKGVQLECKGEGDVVVRCLSDHAVFVQSYLLDREAGR  
 APGDAVHKIYPSAYIKVFDLRQCHRQMQQAATAQAAAAAQAQAAVAGNIPGPGSVGGIAPAISLSAAAGI  
 GVDDLRLRLCILRMSFVKGWGPDYPRQSIKETPCWIEIHLHRLQLLDEVLHTMPIADPQLD

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mg2637\\_c01.zip](https://cdn.origene.com/chromatograms/mg2637_c01.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_005359

**ORF Size:** 1656 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_005359.6](#)

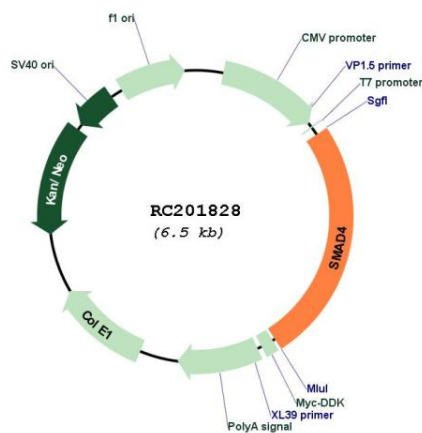
**RefSeq Size:** 3220 bp

**RefSeq ORF:** 1659 bp

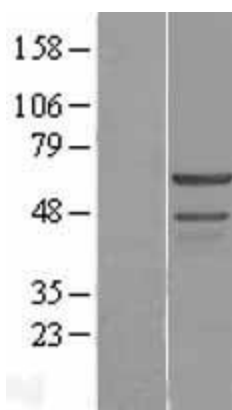
**Locus ID:** 4089

<b>UniProt ID:</b>	<a href="#">Q13485</a>
<b>Cytogenetics:</b>	18q21.2
<b>Domains:</b>	DWB, DWA, MH1
<b>Protein Families:</b>	Druggable Genome, Transcription Factors
<b>Protein Pathways:</b>	Adherens junction, Cell cycle, Chronic myeloid leukemia, Colorectal cancer, Pancreatic cancer, Pathways in cancer, TGF-beta signaling pathway, Wnt signaling pathway
<b>MW:</b>	60.3 kDa
<b>Gene Summary:</b>	This gene encodes a member of the Smad family of signal transduction proteins. Smad proteins are phosphorylated and activated by transmembrane serine-threonine receptor kinases in response to transforming growth factor (TGF)-beta signaling. The product of this gene forms homomeric complexes and heteromeric complexes with other activated Smad proteins, which then accumulate in the nucleus and regulate the transcription of target genes. This protein binds to DNA and recognizes an 8-bp palindromic sequence (GTCTAGAC) called the Smad-binding element (SBE). The protein acts as a tumor suppressor and inhibits epithelial cell proliferation. It may also have an inhibitory effect on tumors by reducing angiogenesis and increasing blood vessel hyperpermeability. The encoded protein is a crucial component of the bone morphogenetic protein signaling pathway. The Smad proteins are subject to complex regulation by post-translational modifications. Mutations or deletions in this gene have been shown to result in pancreatic cancer, juvenile polyposis syndrome, and hereditary hemorrhagic telangiectasia syndrome. [provided by RefSeq, Aug 2017]

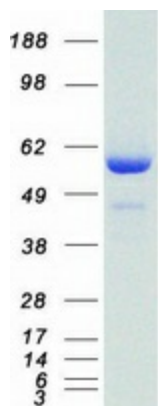
### Product images:



Circular map for RC201828



Western blot validation of overexpression lysate (Cat# [LY401648]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201828 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SMAD4 protein (Cat# [TP301828]). The protein was produced from HEK293T cells transfected with SMAD4 cDNA clone (Cat# RC201828) using MegaTran 2.0 (Cat# [TT210002]).