

Product datasheet for **RG201828**

SMAD4 (NM_005359) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMAD4 (NM_005359) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SMAD4
Synonyms:	DPC4; JIP; MADH4; MYHRS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG201828 representing NM_005359
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGACAATATGTCTATTACGAATACCAACAAGTAATGATGCCTGTCTGAGCATTGTGCATAGTTTGA
 TGTGCCATAGACAAGGTGGAGAGAGTGAACATTTGCAAAAAGAGCAATTGAAAGTTTGGTAAAGAAGCT
 GAAGGAGAAAAAGATGAATTGGATTCTTTAATAACAGCTATAACTACAAATGGAGCTCATCCTAGTAAA
 TGTGTTACCATACAGAGAACATTGGATGGGAGGCTTCAGGTGGCTGGTCGGAAAGGATTTCTCATGTGA
 TCTATGCCCGTCTCTGGAGGTGGCTGATCTTCACAAAAATGAACTAAAACATGTTAAATATTGTGAGTA
 TGCGTTTGACTTAAAATGTGATAGTGTCTGTGTAATCCATATCACTACGAACGAGTTGTATCACCTGGA
 ATTGATCTCTCAGGATTAACACTGCAGAGTAATGCTCCATCAAGTATGATGGTGAAGGATGAATATGTGC
 ATGACTTTGAGGGACAGCCATCGTTGTCCACTGAAGGACATTCAATTCAAACCATCCAGCATCCACCAAG
 TAATCGTGCATCGACAGAGACATACAGCACCCAGCTCTGTTAGCCCATCTGAGTCTAATGCTACCAGC
 ACTGCCAACTTTCCCAACATTCCTGTGGCTTCCACAAGTCAGCCTGCCAGTATACTGGGGGGCAGCCATA
 GTGAAGGACTGTTGCAGATAGCATCAGGGCCTCAGCCAGGACAGCAGCAGAATGGATTTACTGGTCAGCC
 AGCTACTTACCATCATAACAGCACTACCACCTGGACTGGAAGTAGGACTGCACCATACACACCTAATTTG
 CCTCACCACAAAACGGCCATCTTCAGCACCACCCGCCTATGCCGCCCATCCCGGACATTACTGGCCTG
 TTCACAATGAGCTTGCAATCCAGCCTCCATTTCCAATCATCTGCTCCTGAGTATTGGTGTTCATTGC
 TTACTTTGAAATGGATGTTCAAGTAGGAGAGACATTTAAGGTTCTTCAAGCTGCCCTATTGTTACTGTT
 GATGGATACGTGGACCCCTTCTGGAGGAGATCGCTTTTGTGGTCAACTCTCCAATGTCACAGGACAG
 AAGCCATTGAGAGAGCAAGGTTGCACATAGGCAAGGTGTGCAGTTGGAATGTAAGGTGAAGGTGATGT
 TTGGGTACAGGTGCCTTAGTGACCACGCGTCTTTGTACAGAGTTACTACTTAGACAGAGAAGCTGGGCGT
 GCACCTGGAGATGCTGTTATAAGATCTACCCAAGTGCATATATAAAGGTCTTTGATTTGCGTCAGTGT
 ATCGACAGATGCAGCAGCAGGGCTACTGCACAAGCTGCAGCAGCTGCCAGGCAGCAGCCGTGGCAGG
 AAACATCCCTGGCCAGGATCAGTAGGTGGAATAGCTCCAGCTATCAGTCTGTCAGCTGCTGCTGGAATT
 GGTGTTGATGACCTTCGTCGCTTATGCATACTCAGGATGAGTTTTGTGAAAGGCTGGGGACCGGATTACC
 CAAGACAGAGCATCAAAGAAACACCTTGTGGATTGAAATTCACTTACACCGGCCCTCCAGCTCTAGA
 CGAAGTACTTCATACCATGCCGATTGCAGACCCACAACCTTTAGAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG201828 representing NM_005359
 Red=Cloning site Green=Tags(s)

MDNMSITNTPSNDACLIVHSLMCHRQGESETFAKRAIESLVKKLKEKKDELDSLITAITTNGAHPK
 CVTIQRTLDGRLQVAGRKGFPHVIYARLWRWDLHKNELKHVKYCYAFDLKCDSSVCVNPYHYERVVSPG
 IDLSGLTLQSNAPSSMMVKDEYVHDFEGQPSLSTEGHSIQTIQHPPSNRASTETYSTPALLAPSESNA
 TANFPNIPVASTSQPASILGGSHSEGLLQIASGPQPGQQNGFTGQPATYHHNSTTTWTGSRTAPYTPNL
 PHHQNGHLQHHPMPHPGHYWPVHNELAFQPPISNHPAPEYWCSIAFYEMDVQVGETFKVPSSCPVTV
 DGYVDPSSGDRFLGQLSNVHRTEAIERARLHIGKGVQLECKGEGDVWRCLSDHAVFVQSYLLDREAGR
 APGDAVHKIYPSAYIKVFDLRQCHRQMQQAATAQAAAAAQAAGVAGNIPGPGSVGGIAPATISLSAAAGI
 GVDDLRLCILRMSFVKGWGPDYPRQSIKETPCWIEIHLHRLQLLDEVLHTMPIADPQLD

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

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.

RefSeq: [NM_005359.6](#)

RefSeq Size: 3220 bp

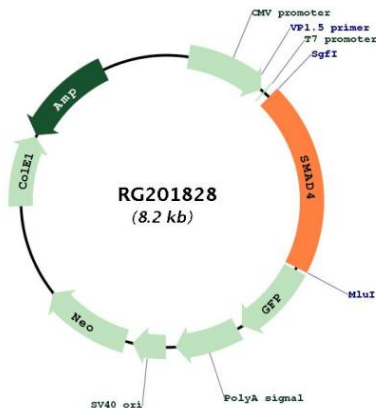
RefSeq ORF: 1659 bp

Locus ID: 4089

UniProt ID: [Q13485](#)

Cytogenetics:	18q21.2
Domains:	DWB, DWA, MH1
Protein Families:	Druggable Genome, Transcription Factors
Protein Pathways:	Adherens junction, Cell cycle, Chronic myeloid leukemia, Colorectal cancer, Pancreatic cancer, Pathways in cancer, TGF-beta signaling pathway, Wnt signaling pathway
Gene Summary:	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 RG201828