

Product datasheet for **RC210866**

SMURF 2 (SMURF2) (NM_022739) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMURF 2 (SMURF2) (NM_022739) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SMURF 2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>RC210866 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCTAACCCCGGAGGCCGGAGGAACGGGCCCGTCAAGCTGCGCCTGACAGTACTCTGTGCAAAAAC
 TGGTGAAAAAGGATTTTTCCGACTTCCTGATCCATTTGCTAAGGTGGTGGTTGATGGATCTGGCAATG
 CCATTCTACAGATACTGTGAAGAATACGCTTGATCCAAAGTGGAATCAGCATTATGACCTGTATATTGGA
 AAGTCTGATTACGATTACGATCAGTGTATGGAATCACAAGAAGATCCATAAGAAACAAGGTCTGGATTTT
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 ATGCAACTCGGGCCAAATGACAATGATACAGTTAGAGGACAGATAGTAGTAAGTCTTCAGTCCAGAGAC
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 GGTCAACAACGACATAGAAATTACATGAGCAGAACACATTTACATACTCTCCAGACCTACCAAGAAGGCTA
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 GCAGATCAATCCTGATTCTGCAGTTAATCCGGAACATTTATCCTATTTCCACTTTGTTGGACGAATAATG
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 CCTATGAAAGCTATGAAAAGCTATATGAAAAGCTGCTAACAGCCATTGAAGAAACATGTGGATTTGCTGT
 GGAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC210866 protein sequence
 Red=Cloning site Green=Tags(s)

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MSNPGRRNGPVKLRLTVLCAKNLVKKDFRLLPDPFAKVVDGSGQCHSTDTVKNTLDPKWNQHYDLYIG
KSDSVTISVWNHKKIHKKQGAGFLGCVRLLSNAINRLKDTGYQRLDLCKLGPNDNDTVRGQIVVSLQSRD
RIGTGGQVVDCSRLFDNDLPDGWEERRTASGRIQYLNHITRTTQWERPTRPASEYSSPGRPLSCFVDENT
PISGTNGATCGQSSDPRLAERRVRSQRHRNYSRTHLHTPPDLPEGYEQRRTTQQQVYFLHTQTGVSTWH
DPRVPRDLSNINCEELGPLPPGWEIRNTATGRVYFVDHNNRTTQFTDPRLSANLHLVLRQNQLKDQQQQ
QVVSCLPDDTECLTVPRYKRDLVQKLKILRQELSQQQPQAGHCRIEVSREEIFEESYRQVMKMRPKDLWK
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GMAVFHGHYIDGGFTLPFYKQLLGSITLDDMELVDPDLHNSLVWILENDITGLVDHTFCVEHNAYGEII
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KIDVNDWKVNTRLKHCTPDSNIVKWFVWAVEFFDEERRARLLQFVTGSSRVPLQGFKALQGAAGPRLFTI
HQIDACTNNLPKAHTCFNRIDIPPYESYEKLYEKLLTAIEETCGFAVE
  
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6201_b05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_022739

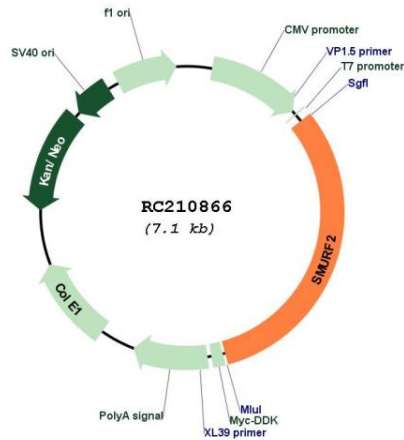
ORF Size: 2244 bp

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](#)

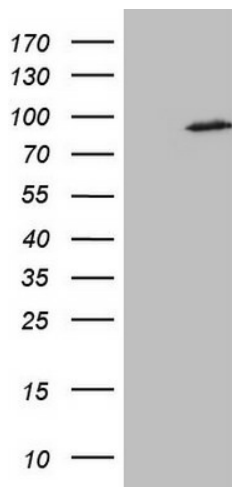
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:	<ol style="list-style-type: none">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_022739.4
RefSeq Size:	3866 bp
RefSeq ORF:	2247 bp
Locus ID:	64750
UniProt ID:	Q9HAU4
Cytogenetics:	17q23.3-q24.1
Domains:	C2, HECT, WW
Protein Families:	Adult stem cells, Druggable Genome, ES Cell Differentiation/IPS, Transcription Factors
Protein Pathways:	Allograft rejection, Antigen processing and presentation, Autoimmune thyroid disease, Cell adhesion molecules (CAMs), Endocytosis, Graft-versus-host disease, TGF-beta signaling pathway, Type I diabetes mellitus, Ubiquitin mediated proteolysis, Viral myocarditis
MW:	86.2 kDa
Gene Summary:	E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates. Interacts with SMAD1 and SMAD7 in order to trigger their ubiquitination and proteasome-dependent degradation. In addition, interaction with SMAD7 activates autocatalytic degradation, which is prevented by interaction with SCYE1. Forms a stable complex with the TGF-beta receptor-mediated phosphorylated SMAD2 and SMAD3. In this way, SMAD2 may recruit substrates, such as SNON, for ubiquitin-mediated degradation. Enhances the inhibitory activity of SMAD7 and reduces the transcriptional activity of SMAD2. Coexpression of SMURF2 with SMAD1 results in considerable decrease in steady-state level of SMAD1 protein and a smaller decrease of SMAD2 level.[UniProtKB/Swiss-Prot Function]

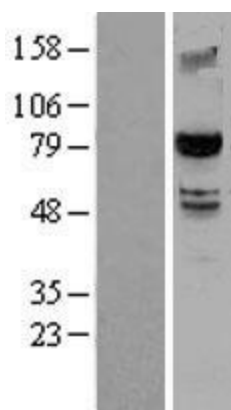
Product images:



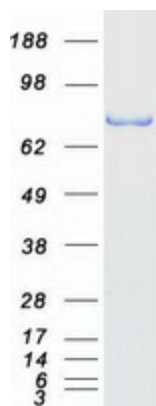
Circular map for RC210866



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SMURF2 (Cat# RC210866, 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-SMURF2 (Cat# [TA806655]). Positive lysates [LY402939] (100ug) and [LC402939] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY402939]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210866 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SMURF2 protein (Cat# [TP310866]). The protein was produced from HEK293T cells transfected with SMURF2 cDNA clone (Cat# RC210866) using MegaTran 2.0 (Cat# [TT210002]).