

## Product datasheet for **RC203451**

### Smoothened (SMO) (NM\_005631) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Smoothened (SMO) (NM_005631) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Smoothened
Synonyms:	CRJS; FZD11; Gx; PHLS; SMOH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>RC203451 representing NM\_005631  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGCCGCTGCCCGCCAGCGCGGGGGCCGGAGCTCCCGCTCCTGGGGCTGCTGCTGCTGCTGCTGG  
GGACCCGGGCGGGGGCGGCCTCGAGCGGGAACGCGACCGGGCTGGGCTCGGAGCGGGCGGGAG  
CGCGAGGAGGAGCGCGGGTGACTGGCCCTCCGCCCGCTGAGCCACTGCGGGCCGGGCTGCCCCCTGC  
GAGCCGCTGCGCTACAACGTGTGCTGGGCTCGGTGCTGCCCTACGGGGCCACCTCCACACTGCTGGCCG  
GAGACTCGGACTCCAGGAGGAAGCGCACGGCAAGCTCGTCTGGTGGGCTCCGGAATGCCCCCG  
CTGCTGGGCAGTGATCCAGCCCCTGCTGTGTGCCGTATACATGCCAAGTGTGAGAATGACCGGGTGGAG  
CTGCCAGCCGTACCCTCTGCCAGGCCACCCGAGGCCCTGTGCCATCGTGGAGAGGGAGCGGGCTGGC  
CTGACTTCTGCGCTGCACTCCTGACCGCTTCCCTGAAGGCTGCACGAATGAGGTGCAGAACATCAAGTT  
CAACAGTTCAGGCCAGTGCAGAGTGCCTTGGTTCGGACAGACAACCCCAAGAGCTGGTACGAGGACGTG  
GAGGGCTGCGGCATCCAGTGCCAGAACCCTCTTACAGAGGCTGAGCACCAGGACATGCACAGCTACA  
TCGCGGCCTTCGGGGCCGTACGGGCTCTGCACGCTTTCACCCCTGGCCACATTCGTGGCTGACTGGCG  
GAACTCGAATCGTACCCTGCTGTTATTCTTCTACGTCAATGCGTGTCTTTGTGGGCAGCATTGGC  
TGGCTGGCCAGTTTATGGATGGTGGCCCGGAGAGATCGTCTGCCGTGCAGATGGCACCATGAGGCTTG  
GGGAGCCACCTCCAATGAGACTCTGTCTGCGTCATCATCTTTGTATCGTGTACTACGCCCTGATGGC  
TGGTGTGGTTTGGTTTGGTCCCTACCTATGCCTGGCACACTTCCTTCAAAGCCCTGGGACCACCTAC  
CAGCCTCTCTCGGCAAGACCTCTACTCCACCTGCTCACCTGGTCACTCCCTTTGTCTCACTGTGG  
CAATCCTTGTGTGGCGCAGGTGGATGGGACTCTGTGAGTGGCATTGTTTTGTGGGCTACAAGAACTA  
CCGATACCGTGGGGCTTCGTGCTGGCCCAATCGGCCTGGTGTCTCATCGTGGGAGGCTACTTCTCATC  
CGAGGAGTCATGACTCTGTTCTCCATCAAGAGCAACCACCCGGGCTGCTGAGTGAGAAGGCTGCCAGCA  
AGATCAACGAGACCATGCTGCGCCTGGGCATTTTTGGCTTCTGGCCTTTGGCTTTGTGCTCATTACCTT  
CAGCTGCCACTTCTACGACTTCTCAACCAGGCTGAGTGGGAGCGCAGCTTCCGGGACTATGTGCTATGT  
CAGGCCAATGTGACCATCGGGCTGCCACCAAGCAGCCCATCCCTGACTGTGAGATCAAGAATCGCCCGA  
GCCTTCTGGTGGAGAAGATCAACCTGTTTGCCATGTTTGAAGTGGCATCGCCATGAGCACCTGGGTCTG  
GACCAAGGCCACGCTGCTCATCTGGAGGCGTACCTGGTGCAGTTGACTGGCAGAGTGACGATGAGCCA  
AAGCGGATCAAGAAGAGCAAGATGATTGCAAGGCCTTCTAAGCGGCACGAGCTCCTGCAGAACCCAG  
GCCAGGAGCTGTCTTACGATGCACACTGTGTCCACGACGGGCCCGTGGCGGGCTTGGCCTTTGACCT  
CAATGAGCCCTCAGCTGATGTCTCTGCTGGGCCAGCATGTACCAAGATGGTGGCTCGGAGAGGA  
GCCATACTGCCCCAGGATATTTCTGTCACCCCTGTGGCAACTCCAGTGGCCCCAGAGGAACAAGCCAACC  
TGTGGCTGGTTGAGGCAGAGATCTCCCAAGAGTGCAGAAAGCGCTGGGCCGGAAGAAGAAGAGGAGGAA  
GAGGAAGAAGGAGGTGTGCCCGTGGCGCCGCCCTGAGCTTACCCCCCTGCCCTGCCCCAGTACC  
ATTCCTCGACTGCCTCAGCTGCCCCGGCAGAAATGCCTGGTGGCTGCAGGTGCCTGGGAGCTGGGGACT  
CTTGCCGACAGGGAGCGTGGACCCTGGTCTCAACCCATTCTGCCAGAGCCAGTCCCCCTCAGGATCC  
ATTTCTGCCAGTGACCGGCCCCCGTGGCATGGGCTCATGGCCGCCACAGGGCCCTGGGCCTATTCAC  
TCCCGCACCAACCTGATGGACACAGAACTCATGGATGCAGACTCGGACTTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC203451 representing NM\_005631  
Red=Cloning site Green=Tags(s)

MAAARPARGPPELLGLLLLLLLGDPGRGAASSGNATGPGPRSAGGSARRSAAVTGPPPPLSHCGRAAPC  
EPLRYNVCLGSVLPYGATSTLLAGDSDSQEEAHGKLVLSGLRNAPRCWAVIQPLLCAVYMPKCENDRVE  
LPSRTLCAQTRGPCAIVERERGWPDFLRCTPDRFPEGCTNEVQNIKFNSSGQCEVPLVRTDNPKSWYEDV  
EGCGIQCQNPLFTEAEHQDMHSYIAAFGAVTGLCTLFTLTFVADWRNSNRYPAVILFYVNACFFVGSIG  
WLAQFMDGARREIVCRADGTMRLGEPTSNETLSCVIFVIVYYALMAGVVWFVVLTYAWHTSFKALGTTY  
QPLSGKTSYFHLLTWSLPFVLTVAAILAVAQVDGDSVSGICFVGYKNRYRAGFVLAFIGLVLIVGGYFLI  
RGVMTLFSIKSNHPGLLSEKAASKINETMLRLGIFGFLAFGFVLITFSCHFYDFFNQAEWERSFRDYVLC  
QANVTIGLPTKQPIPDCIEKNRPSLLVEKINLFAFMGTGIAMSTWVWTKATLLIWRRTWCRLTGQSDDEP  
KRIKKSAMIKAFAFKRHELLQNPQELSFMSHTVSHDGPVAGLAFDLNEPSADVSSAWAQHVTKMVARRG  
AILPQDISVTPVATPVPPEEQANLWVLAIEISPELQKRLGRKKRRRKRKKEVCPLAPPELHPPAPAPST  
IPRLPQLPRQKCLVAAGAWGAGDSCRQGAWTLVSNPFCPEPSPQDPFLPSAPAPVAWAHGRRQGLGPIH  
SRTNLMDELMDADSDF

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg3328\\_d05.zip](https://cdn.origene.com/chromatograms/mg3328_d05.zip)

**Restriction Sites:** Sgfl-Mlul

## Cloning Scheme:



ACCN: NM\_005631

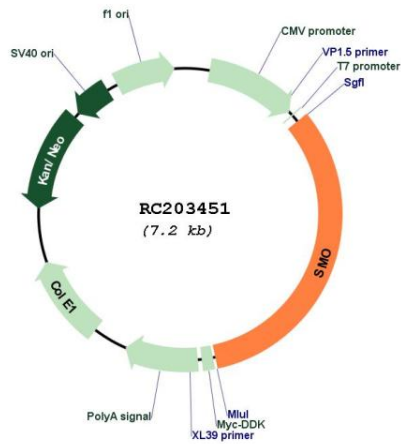
ORF Size: 2361 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

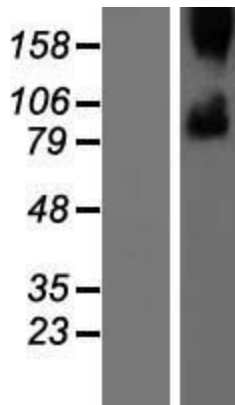
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in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

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_005631.3</a></u> , <u><a href="#">NP_005622.1</a></u>
<b>RefSeq Size:</b>	3772 bp
<b>RefSeq ORF:</b>	2364 bp
<b>Locus ID:</b>	6608
<b>UniProt ID:</b>	<u><a href="#">Q99835</a></u>
<b>Cytogenetics:</b>	7q32.1
<b>Protein Families:</b>	Druggable Genome, ES Cell Differentiation/IPS, Stem cell relevant signaling - DSL/Notch pathway, Transmembrane
<b>Protein Pathways:</b>	Basal cell carcinoma, Hedgehog signaling pathway, Pathways in cancer
<b>MW:</b>	86.2 kDa
<b>Gene Summary:</b>	The protein encoded by this gene is a G protein-coupled receptor that interacts with the patched protein, a receptor for hedgehog proteins. The encoded protein transduces signals to other proteins after activation by a hedgehog protein/patched protein complex. [provided by RefSeq, Jul 2010]

Product images:



Circular map for RC203451



Western blot validation of overexpression lysate (Cat# [LY417163]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203451 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).