

## 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)



[View online »](#)

ORF Nucleotide  
Sequence:

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

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCGCTGCCCGCCAGCGCGGGGGCCGGAGCTCCCGCTCCTGGGGCTGCTGCTGCTGCTGCTGG  
 GGGACCCGGGCGGGGGCGGCCTCGAGCGGGAACGCGACCGGGCTGGGCTCGGAGCGGGCGGGAG  
 CGCGAGGAGGAGCGCGGGTGACTGGCCCTCCGCCCGCTGAGCCACTGCGGGCCGGGCTGCCCCCTGC  
 GAGCCGCTGCGCTACAACGTGTGCTGGGCTCGGTGCTGCCCTACGGGGCCACCTCCACACTGCTGGCCG  
 GAGACTCGGACTCCAGGAGGAAGCGCACGGCAAGCTCGTCTGGTGGGCTCCGGAATGCCCCCG  
 CTGCTGGGCAGTGATCCAGCCCCTGCTGTGTGCCGTATACATGCCAAGTGTGAGAATGACCGGGTGGAG  
 CTGCCAGCCGTACCCTCTGCCAGGCCACCGAGGCCCTGTGCCATCGTGGAGAGGGAGCGGGCTGGC  
 CTGACTTCTGCGCTGCACTCCTGACCGCTTCCCTGAAGGCTGCACGAATGAGGTGCAGAACATCAAGTT  
 CAACAGTTCAGGCCAGTGCAGAGTGCCTTGGTTCGGACAGACAACCCCAAGAGCTGGTACGAGGACGTG  
 GAGGGCTGCGGCATCCAGTGCCAGAACCCTCTTACAGAGGCTGAGCACCAGGACATGCACAGCTACA  
 TCGCGGCCTTCGGGGCCGTACGGGCTCTGCACGCTTTCACCCCTGGCCACATTCGTGGCTGACTGGCG  
 GAACTCGAATCGTACCCTGCTGTTATTCTTCTACGTCAATGCGTGCTTCTTTGTGGGACGATTGGC  
 TGGCTGGCCAGTTTATGGATGGTGCCCGGAGAGATCGTCTGCCGTGCAGATGGCACCATGAGGCTTG  
 GGGAGCCACCTCCAATGAGACTCTGTCTGCGTCATCATCTTTGTATCGTGTACTACGCCCTGATGGC  
 TGGTGTGGTTTGGTTTGTGGTCCACCTATGCCTGGCACACTTCCTTCAAAGCCCTGGGACCACCTAC  
 CAGCCTCTCTCGGCAAGACCTCTACTCCACCTGCTCACCTGGTCACTCCCTTTGTCTCACTGTGG  
 CAATCCTTGTGTGGCGCAGGTGGATGGGACTCTGTGAGTGGCATTGTTTTGTGGGCTACAAGAAGTA  
 CCGATACCGTGGGGCTTCGTGCTGGCCCAATCGGCCTGGTGTCTCATCGTGGGAGGCTACTTCTCATC  
 CGAGGAGTCATGACTCTGTTCTCCATCAAGAGCAACCACCCGGGCTGCTGAGTGAGAAGGCTGCCAGCA  
 AGATCAACGAGACCATGCTGCGCCTGGGCATTTTTGGCTTCTGGCCTTTGGCTTTGTGCTCATTACCTT  
 CAGCTGCCACTTCTACGACTTCTCAACCAGGCTGAGTGGGAGCGCAGCTTCCGGGACTATGTGCTATGT  
 CAGGCCAATGTGACCATCGGGCTGCCACCAAGCAGCCCATCCCTGACTGTGAGATCAAGAATCGCCCGA  
 GCCTTCTGGTGGAGAAGATCAACCTGTTTGCCATGTTTGAAGTGGCATCGCCATGAGCACCTGGGTCTG  
 GACCAAGGCCACGCTGCTCATCTGGAGGCGTACCTGGTGCAGTTGACTGGCAGAGTGACGATGAGCCA  
 AAGCGGATCAAGAAGAGCAAGATGATTGCAAGGCCTTCTCTAAGCGGCACGAGCTCCTGCAGAACCCAG  
 GCCAGGAGCTGTCTTACGATGCACACTGTGTCCACGACGGGCCCGTGGCGGGCTTGGCCTTTGACCT  
 CAATGAGCCCTCAGCTGATGTCTCTGCTGGGCCAGCATGTACCAAGATGGTGGCTCGGAGAGGA  
 GCCATACTGCCCCAGGATATTTCTGTACCCCTGTGGCAACTCCAGTGCCCCAGAGGAACAAGCCAACC  
 TGTGGCTGGTTGAGGCAGAGATCTCCCCAGAGCTGCAGAAAGCGCTGGGCCGGAAGAAGAAGAGGAGGA  
 GAGGAAGAAGGAGGTGTGCCCGTGGCGCCGCCCTGAGCTTACCCCCCTGCCCTGCCCCAGTACC  
 ATTCCTCGACTGCCTCAGCTGCCCCGGCAGAAATGCCTGGTGGCTGCAGGTGCCTGGGAGCTGGGGACT  
 CTTGCCGACAGGGAGCGTGGACCCTGGTCTCAACCCATTCTGCCAGAGCCAGTCCCCCTCAGGATCC  
 ATTTCTGCCAGTGACCGGCCCCCGTGGCATGGGCTCATGGCCGCCACAGGGCCTGGGCCTATTAC  
 TCCCGCACCAACCTGATGGACACAGAACTCATGGATGCAGACTCGGACTTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

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

MAAARPARGPPELLLGLLLLLLLGDPGRGAASSGNATGPGPRSAGGSARRSAAVTGPPPPLSHCGRAAPC  
EPLRYNVCLGSVLPYGATSTLLAGDSDSQEEAHGKLVLSGLRNAPRCWAVIQPLLCAVYMPKCENDRVE  
LPSRTLCAQTRGPCAIVERERGWPDFLRCTPDRFPEGCTNEVQNIKFNSSGQCEVPLVRTDNPKSWYEDV  
EGCGIQCQNPLFTEAEHQDMHSYIAAFGAVTGLCTLFTLTFVADWRNSNRYPAVILFYVNACFFVGSIG  
WLAQFMDGARREIVCRADGTMRLGEPTSNETLSCVIFVIVYYALMAGVVWFVVLTYAWHTSFKALGTTY  
QPLSGKTSYFHLLTWSLPFVLTVAAILAVAQVDGDSVSGICFVGYKNRYRAGFVLAPIGLVLIIVGGYFLI  
RGVMTLFSIKSNHPGLLSEKAASKINETMLRLGIFGFLAFGFVLITFSCHFYDFFNQAEWERSFRDYVLC  
QANVTIGLPTKQPIPDCEIKNRPSLLVEKINLFAFMGTGIAMSTWVWTKATLLIWRRTWCRLTGQSDDEP  
KRIKKSAMIKAFAFKRHELLQNPQELSFMSHTVSHDGPVAGLAFDLNEPSADVSSAWAQHVTKMVARRG  
AILPQDISVTPVATPVPPEEQANLWVLAEISPELQKRLGRKKRRRKRKKEVCPLAPPELHPPAPAPST  
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

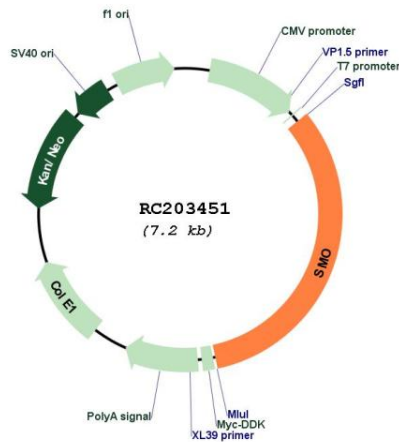
ORF Size: 2361 bp

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.

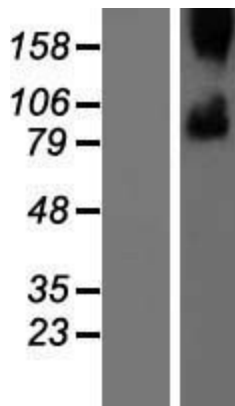
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_005631.3</a> , <a href="#">NP_005622.1</a>
<b>RefSeq Size:</b>	3772 bp
<b>RefSeq ORF:</b>	2364 bp
<b>Locus ID:</b>	6608
<b>UniProt ID:</b>	<a href="#">Q99835</a>
<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]).