

## Product datasheet for **RC225801**

### SHC (SHC1) (NM\_001130041) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SHC (SHC1) (NM_001130041) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SHC
Synonyms:	SHC; SHCA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC225801 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGAACAAGCTGAGTGGAGGCGGGCGCAGGACTCGGGTGAAGGGGGCCAGCTTGGGGCGAGGAGT  
 GGACCCGCCACGGGAGCTTTGTCAATAAGCCCACGCGGGGCTGGCTGCATCCCAACGACAAAGTCATGGG  
 ACCCGGGTTTCCTACTTGGTTCGGTACATGGGTGTGTGGAGGTCTCCAGTCAATGCGTGCCCTGGAC  
 TTCAACACCCGGACTCAGGTACCAGGGAGGCCATCAGTCTGGTGTGTGAGGCTGTGCCGGTGCTAAGG  
 GGGCGACAAGGAGGAGAAAGCCCTGTAGCCGCCGCTCAGCTCTATCCTGGGAGGAGTAACCTGAAATT  
 TGCTGGAATGCCAATCACTCTCACCGTCTCCACCAGCAGCCTCAACCTCATGGCCGAGACTGCAAAACAG  
 ATCATCGCAACCACCACATGCAATCTATCTATTTGCATCCGGCGGGGATCCGGACACAGCCGAGTATG  
 TCGCCTATGTTGCCAAAGACCCTGTGAATCAGAGAGCCTGCCACATTCTGGAGTGTCCCAGGGCTTGC  
 CCAGGATGTCATCAGCACCATTGGCCAGGCCTTCGAGTTGCGCTTCAAACAATACCTCAGGAACCCACCC  
 AAAGTGGTCAACCTCATGACAGGATGGCTGGCTTTGATGGCTCAGCATGGGATGAGGAGGAGGAAGAGC  
 CACCTGACCATCAGTACTATAATGACTTCCCGGGGAAGGAACCCCTTGGGGGGGTGGTAGACATGAG  
 GCTTCGGGAAGGAGCCGCTCCAGGGGCTGCTCGACCCACTGCACCCAATGCCAGACCCCGACCCACTTG  
 GGAGCTACATTGCCTGTAGGACAGCCTGTTGGGGGAGATCCAGAAGTCCGCAAACAGATGCCACCTCCAC  
 CACCCTGTCCAGGAGAGAGCTTTTTGATGATCCCTCCTATGTCAACGTCCAGAACCTAGACAAGGCCCG  
 GCAAGCAGTGGTGGTGTGGCCCCCAATCTGCTATCAATGGCAGTGACCCCGGACCTGTTTGAC  
 ATGAAGCCCTTCGAAGATGCTCTTCGCGTGCCTCCACCTCCCAAGTCCGTTGCTGAGCAGCTCC  
 GAGGGGAGCCCTGGTTCATGGGAAGCTGAGCCGGCGGAGGCTGAGGCACTGCTGCAGTCAATGGGGA  
 CTTCTGGTACGGGAGAGCACGACCACACCTGGCCAGTATGTGCTCACTGGCTTGCAGAGTGGGACGCT  
 AAGCATTGCTACTGGTGGACCCTGAGGGTGTGGTTCGGACTAAGGATCACCGCTTTGAAAGTGTACGTC  
 ACCTTATCAGCTACCACATGGACAATCACTTGCCCATCATCTCTGCGGGCAGCGAACTGTGTCTACAGCA  
 ACCTGTGGAGCGGAACTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC225801 protein sequence  
 Red=Cloning site Green=Tags(s)

MNKLSGGGRRTRVEGGQLGGEWTRHGSFVNKPTRGWLHPNDKVMGPGVSYLVRYMGCVEVLQSMRALD  
 FNTRTQVTREAIISLVCEAVPGAKGATRRRKPCSRPLSSILGRSNLKFAGMPIITLTVSTSSLNLMAADCKQ  
 IIANHHMQSISFASGGDPDTAEYVAYVAKDPVNQRACHILECPEGLAQDVIISTIGQAFELRFKQYLRNPP  
 KLVTPHDMAGFDGSAWDEEEEEPPDHQYYNDFPGKEPPLGGVDMRLREGAAPGAARPTAPNAQTPSHL  
 GATLPVGPVGGDPEVRKQMPPPPCPGRELFDDPSYVNVQNLDKARQAVGGAGPPNPAINGSAPRDLFD  
 MKPFEDALRVPPPQSVSMAEQLRGEWPFHGKLSRREAEALLQLNGDFLVRESTTTPGQYVLTGLQSGQP  
 KHLLLVDPGVVTRKDRHFESVSHLISYHMDNHLPIISAGSELCQQPVERKL

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001130041

**ORF Size:** 1419 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\\_001130041.2](#)

**RefSeq Size:** 3192 bp

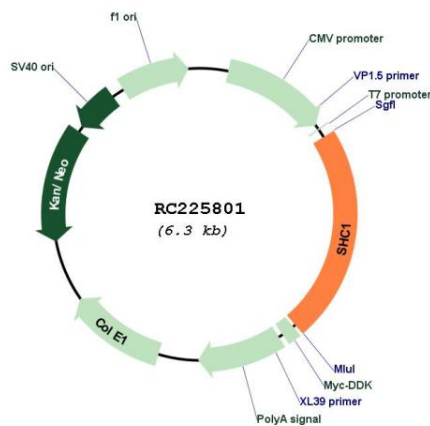
**RefSeq ORF:** 1422 bp

**Locus ID:** 6464

**UniProt ID:** [P29353](#)

<b>Cytogenetics:</b>	1q21.3
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Adherens junction, Arrhythmogenic right ventricular cardiomyopathy (ARVC), Chemokine signaling pathway, Chronic myeloid leukemia, Dilated cardiomyopathy, ErbB signaling pathway, Focal adhesion, Glioma, Hypertrophic cardiomyopathy (HCM), Insulin signaling pathway, Leukocyte transendothelial migration, Natural killer cell mediated cytotoxicity, Neurotrophin signaling pathway, Pathogenic Escherichia coli infection, Regulation of actin cytoskeleton, Tight junction, Vibrio cholerae infection, Viral myocarditis
<b>MW:</b>	51.6 kDa
<b>Gene Summary:</b>	This gene encodes three main isoforms that differ in activities and subcellular location. While all three are adapter proteins in signal transduction pathways, the longest (p66Shc) may be involved in regulating life span and the effects of reactive oxygen species. The other two isoforms, p52Shc and p46Shc, link activated receptor tyrosine kinases to the Ras pathway by recruitment of the GRB2/SOS complex. p66Shc is not involved in Ras activation. Unlike the other two isoforms, p46Shc is targeted to the mitochondrial matrix. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Feb 2011]

**Product images:**



Circular map for RC225801