

## Product datasheet for **RG224734**

### SHC (SHC1) (NM\_183001) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SHC (SHC1) (NM_183001) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SHC
Synonyms:	SHC; SHCA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG224734 representing NM\_183001  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGAATCTCTGCCCCCAAGCCCAAGTACAATCCACTCCGGAATGAGTCTCTGTATCGATGGAGGAAG  
 GGGCTTCTGGGTCCACCCCGGAGGAGCTGCCTTCCCACCAGCTTCACTCCCTGGGGCCATCTGCC  
 TCCTCTGCCTGGGGACGATAGTCCCACTACCCTGTGCTCCTTCTCCCCGGATGAGCAACCTGAGGCTG  
 GCCAACCCGGCTGGGGGCGCCAGGGTCTAAGGGGGAGCCAGGAAGGGCAGCTGATGATGGGGAGGGGA  
 TCGTAGGGGACGATGCCAGACTCAGGCCCTACCCCTCCTCCAGGACATGAACAAGCTGAGTGGAGG  
 CGGCGGGCAGGACTCGGGTGAAGGGGGCCAGCTTGGGGGCGAGGAGTGACCCGCCACGGGAGCTTT  
 GTCAATAAGCCCACGCGGGGCTGGCTGCATCCCAACGACAAAGTCATGGGACCCGGGTTTCTACTTGG  
 TTCGGTACATGGGTTGTGTGGAGGTCTCCAGTCAATGCGTGCCTGGACTTCAACACCCGGACTCAGT  
 CACCAGGAGGCCATCAGTCTGGTGTGTGAGGCTGTGCCGGTGTAAAGGGGCGACAAGGAGGAGAAAG  
 CCCTGTAGCCGCCGCTCAGCTCTATCCTGGGGAGGAGTAACTGAAATTTGCTGGAATGCCAATCACTC  
 TCACCGTCTCCACCAGCAGCCTCAACCTCATGGCCGAGACTGCAACAGATCATCGCAACCACCAT  
 GCAATCTATCTCATTTGCATCCGGCGGGATCCGGACACAGCCGAGTATGTCGCCTATGTTGCCAAAGAC  
 CCTGTGAATCAGAGAGCCTGCCACATCTGGAGTGTCCCAGGGCTTCCCAGGATGTCATCAGCACCA  
 TTGGCCAGGCCTTCGAGTTGCGCTTCAAACAATACCTCAGGAACCCCAAACTGGTCAACCCTCATGA  
 CAGGATGGCTGGCTTTGATGGCTCAGCATGGGATGAGGAGGAGGAAGAGCCACCTGACCATCAGTACTAT  
 AATGACTTCCCAGGGAAGGAACCCCTTGGGGGGGTGGTAGACATGAGGCTTCGGGAAGGAGCCGCTC  
 CAGGGGCTGCTCAGCCACTGCACCCAATGCCAGACCCCAAGCCACTTGGGAGTACATTCCTGTAGG  
 ACAGCCTGTTGGGGGAGATCCAGAAGTCCGCAACAGATGCCACCTCCACCACCTGTCCAGGCAGAGAG  
 CTTTTTGTATGATCCCTCCTATGTCAACGTCAGAACCTAGACAAGGCCCGCAAGCAGTGGTGGTCTG  
 GGCCCCCAATCTGCTATCAATGGCAGTGCACCCCGGACCTGTTTGACATGAAGCCCTTCAAGATGC  
 TCTTCGGGTGCCTCCACCTCCCACTCGGTGTCCATGGCTGAGCAGCTCCGAGGGGAGCCCTGGTCCAT  
 GGGAAAGCTGAGCCGGCGGGAGGCTGAGGCACTGCTGCAGCTCAATGGGACTTCTTGGTACGGGAGAGCA  
 CGACCACACTGGCCAGTATGTGCTCACTGGCTGCAGAGTGGGAGCCTAAGCATTGCTACTGGTGA  
 CCCTGAGGGTGTGGTTCGACTAAGGATACCCGCTTTGAAAGTGCAGTACCTTATCAGTACCACATG  
 GACAATCACTTGGCCATCATCTCTCGGGCAGCGAACTGTGTCTACAGCAACCTGTGGAGCGGAAACTG

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG224734 representing NM\_183001  
 Red=Cloning site Green=Tags(s)

MNLLPPKPKYNPLRNESLSSMEEGASGSTPPEELPSPPASSLGPILPPLPGDSDPTTLCSSFFPRMSNLR  
 ANPAGGRPGSKGEPGRAADDGEGIVGAAMPDSGPLPLLQDMNKL SGGGRRRTRVEGGQLGGEWTRHGSF  
 VNKPTRGWLHPNDKVMGPGVSYLVRYMGCVEVLQSMRALDFNTRTQVTREAI SLVCEAVPGAKGATRRRK  
 PCSRPLSSILGRSNLKFAGMPITLTVSTSSNLMAADCKQIIANHHMQSISFASGGPDTAEYVAVYAKD  
 PVNQRACHILECPEGLAQDVIISTIGQAFELRFKQYLRNPPKLVTPHDMAGFDGSAWDEEEEEPPDHQYY  
 NDFPGKEPPLGGVDMRLREGAAPGAARPTAPNAQTPSHL GATLPVGPVGGDPEVRKQMPPPPPCPGRE  
 LFDDPSYVNVQNLDKARQAVGGAGPPNPAINGSAPRDLFDMKPFEDALRVPPPQSVSMAEQLRGEPUFH  
 GKLSRREAEALLQLNGDFLVRESTTTPGQYVLTGLQSGQPKHLLLVDPGVVVRTKDRHFESVSHLISYHM  
 DNHLPIISAGSELCLQPVERKL

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_183001

**ORF Size:** 1749 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](#)

**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.

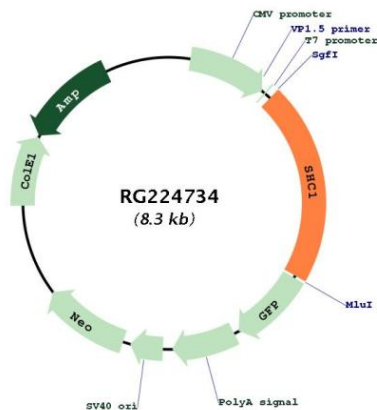
**RefSeq:** [NM\\_183001.3, NP\\_892113.3](#)  
**RefSeq Size:** 1752 bp  
**RefSeq ORF:** 1752 bp  
**Locus ID:** 6464  
**UniProt ID:** [P29353](#)  
**Cytogenetics:** 1q21.3

**Protein Families:** Druggable Genome

**Protein Pathways:** 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

**Gene Summary:** 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 RG224734