

## Product datasheet for **RG204362**

### SHC (SHC1) (NM\_003029) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SHC (SHC1) (NM_003029) 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:**

>RG204362 representing NM\_003029  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGAACAAGCTGAGTGGAGGCGGGCGCAGGACTCGGGTGAAGGGGGCCAGCTTGGGGCGAGGAGT  
 GGACCCGCCACGGGAGCTTTGTCAATAAGCCACGCGGGGCTGGCTGCATCCAACGACAAAGTCATGGG  
 ACCCGGGGTTTCCTACTTGGTTCGGTACATGGGTGTGTGGAGGTCTCCAGTCAATGCGTGCCCTGGAC  
 TTCAACACCCGGACTCAGGTCAACAGGGAGGCCATCAGTCTGGTGTGTGAGGCTGTGCCGGTGCTAAGG  
 GGGCGACAAGGAGGAGAAAGCCCTGTAGCCGCCGCTCAGCTCTATCCTGGGAGGAGTAACCTGAAATT  
 TGCTGGAATGCCAATCACTCTCACCGTCTCCACCAGCAGCCTCAACCTCATGGCCGAGACTGCAACAG  
 ATCATCGCAACCACCACATGCAATCTATCTATTTGCATCCGGCGGGGATCCGGACACAGCCGAGTATG  
 TCGCCTATGTTGCCAAAGACCCTGTGAATCAGAGAGCCTGCCACATTCTGGAGTGTCCCAGGGCTTGC  
 CCAGGATGTCATCAGCACCATTGGCCAGGCCTTCGAGTTGCGCTTCAAACAATACCTCAGGAACCCACCC  
 AAAGTGGTCAACCTCATGACAGGATGGCTGGCTTTGATGGCTCAGCATGGGATGAGGAGGAGGAAGAGC  
 CACCTGACCATCAGTACTATAATGACTTCCCGGGGAAGGAACCCCTTGGGGGGGGTGGTAGACATGAG  
 GCTTCGGGAAGGAGCCGCTCCAGGGGCTGCTCGACCCACTGCACCCAATGCCAGACCCCGACCTTG  
 GGAGCTACATTGCCTGTAGGACAGCCTGTTGGGGGAGATCCAGAAGTCCGCAAACAGATGCCACCTCCAC  
 CACCCTGTCCAGCAGGACAGAGACTTTTATGATCCCTCCTATGTCAACGTCCAGAACCTAGACAAGGC  
 CCGGAAGCAGTGGTGGTGTGGGCCCCCAATCCTGCTATCAATGGCAGTGCACCCGGGACCTGTTT  
 GACATGAAGCCCTTCGAAGATGCTTTCGCGTGCCTCCACCTCCCAGTCCGTTCCATGGCTGAGCAGC  
 TCCGAGGGGACCCTGGTCCATGGGAAGCTGAGCCGGCGGGAGGCTGAGGCACTGCTGAGCTCAATGG  
 GGACTTCTGGTACGGGAGAGCACGACCACCTGGCCAGTATGTGCTCACTGGCTTGCAGAGTGGGCAG  
 CCTAAGCATTTGCTACTGGTGGACCCTGAGGGTGTGGTTCGGACTAAGGATCACCCTTTGAAAGTGCA  
 GTCACCTTATCAGCTACCACATGGACAATCACTTGCCCATCATCTCTGCGGGCAGCGAAGTGTGTACA  
 GCAACCTGTGGAGCGGAAACTG

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG204362 representing NM\_003029  
 Red=Cloning site Green=Tags(s)

MNKL SGGGRRTRVEGGQLGGEWTRHGSFVNKPTRGWLHPNDKVMGPGVSYLVRYMGCVEVLQSMRALD  
 FNTRTQVTREAI SLVCEAVPGAKGATRRRKPCSRPLSSILGRSNLKFAGMPITLTVSTSSLNLMAADCKQ  
 IIANHHMQSISFASGGDPDAEYVAYVAKDPVNQRACHILECPEGLAQDVI STIGQAFELRFKQYLRNPP  
 KLVTPHDRMAGFDGSAWDEEEEEPPDHQYNDFFPGKEPPLGGVDMRLREGAAPGAARPTAPNAQTPSHL  
 GATLPVGPVGGDPEVRKQMPPPPAPAGREL FDDPSYVNVQNLDKARQAVGGAGPPNPAINGSAPRDLF  
 DMKPFEDALRVPPPQSVSMAEQLRGEPWFHGKLSRREAEALLQLNGDFLVRESTTTPGQYVLTGLQSGQ  
 PKHLLLVDPGVRVKDHRFESVSHLISYHMDNHLPIISAGSELCLQPVERKL

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_003029

**ORF Size:** 1422 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\\_003029.5](#)

**RefSeq Size:** 3076 bp

**RefSeq ORF:** 1425 bp

**Locus ID:** 6464

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

**Cytogenetics:** 1q21.3

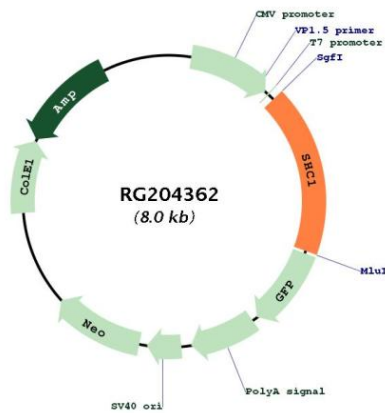
**Domains:** SH2, PID

**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 RG204362