

## Product datasheet for **RG222805**

### **SIM1 (NM\_005068) Human Tagged ORF Clone**

#### **Product data:**

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                     |
| Product Name:             | SIM1 (NM_005068) Human Tagged ORF Clone |
| Tag:                      | TurboGFP                                |
| Symbol:                   | SIM1                                    |
| Synonyms:                 | bHLHe14                                 |
| Mammalian Cell Selection: | Neomycin                                |
| Vector:                   | pCMV6-AC-GFP (PS100010)                 |
| E. coli Selection:        | Ampicillin (100 ug/mL)                  |



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**ORF Nucleotide Sequence:**

>RG222805 representing NM\_005068  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAAAGAAAAGTCCAAAATGCTGCGCGGACTAGGAGGGAGAAGGAAAACAGTGAATTTTATGAACTGG  
 CTAATAACTGCCTTTGCCCTCGGCTATCACCTCGCAGCTGGACAAGCATCCATAATCAGACTCAGCAG  
 CAGCTATCTCAAAATGAGAGTGGTGTCCAGAGGGGCTCGGCGAGGCGTGGGGCCACTCAAGTCGGACC  
 AGCCCCCTGGACAACGTTGGCCGAGAACTGGGCTCCCATCTGCTCCAGACCCTGGATGGCTTCATCTTCG  
 TGGTAGCCCCAGATGGGAAGATCATGTACATCTCAGAGACAGCCTCAGTCCACTTGGGTCTTTCTCAGGT  
 AGAGCTGACCGGAAACAGCATTTATGAATACATTCACCCGGCAGACCACGACGAGATGACGGCGGTGCTC  
 ACCGCCATCAACCCTACACTCTCACTTCGTGCAGGAGTATGAGATCGAGCGCTCCTTCTCTGAGGA  
 TGAAGTGGCTTTGGCCAAGCGTAACGCCGGCCTCACCTGTGGCGGCTACAAGGTCATCCACTGCAGCGG  
 CTACTTGAAGATCCGCCAGTACAGCCTGGACATGTCCCTTCGACGGCTGCTACAAAACGTGGGCCTG  
 GTGGCCGTGGGCCACTCGCTGCCTCCCAGCGCCGTACCGGAGATCAAGCTACACAGCAATATGTTTATGT  
 TCCGCGCCAGCCTGGACATGAAGCTCATTTTCTGGACTCCAGGGTGGCGGAGCTGACGGGGTACGAACC  
 TCAGGACCTGATTGAGAAGACTCTGTACCACCATGTGCACGGCTGCGACACCTTCCACCTGCGCTGCGCG  
 CACCATTTGCTGCTGGTGAAGGGACAGGTGACCACCAAGTACTACAGGTTCTGGCGAAAACAGCGCGGT  
 GGGTATGGGTGCAGAGCTACGCGACCATCGTGCACAACAGTGCCTCCTCCAGGCCACACTGTATCGTCAG  
 CGTCAACTATGTCCTCACAGACAGAAATAAAAGGGCTGCAGCTCTCCTGGATCAGATCTCAGCCTCC  
 AAACAGCCTTCTCTATAACCAGCAGCTCACCCCCACCATGACTGACAACAGAAAAGGGGCCAAATCCC  
 GGCTCTCCAGCTCAAAGTCAAAATCCAGGACTTCCCATACCTCAGTATTCGGGATTTACACAGAAAAG  
 ATCGGAATCTGATCATGACAGCCAGTGGGGCGGAAGTCCCTTGACCGACACGGCCTCTCCGAGCTTCTG  
 GACCCCGCGGATAGGCCTGGCTCCAGCAGCAGCATCGTGCCTACAGACAGTTTTCGGACCGCAGCT  
 CTCTCTGCTATGGCTTTGCGCTTGACCACTCGAGGCTGGTGAAGAGAGGCATTTCCATACCCAGGCCTG  
 TGAAGGAGGCCGATGTGAGGCAGGCAGTACTTCTGGGAACGCCGAGGCCGGGAGGGAGCCCTGGTGG  
 GGCTCTCGCGCAGCCTTGCCCTGACAAAGGCCTCCCAGAAAGCAGAGAAGCCTATGAAAACAGCATGC  
 CTCACATCGTTCAGTCCACAGGATCCATGGGCGAGGTCATTGGGATGAAGATAGTGTGGTCAGTCTCC  
 AGACCTGGGTTCGCCAGTGAATCAGGTGACCGATATCGTACTGAGCAGTATCAAAGTAGCCACATGAA  
 CCCAGCAAAATTGAAACTCTTATAAGAGCCACTCAGCAAATGATTAAGAAGAAGAGAACAGATTACAGC  
 TAAGGAAAGCCCCCTCAGACCAACTGGCTTCCATTAATGGGGCTGGGAAAAAACACTCCCTGTGTTTGC  
 AAATAACCAACAGCCCCACCAACAGGTGAAGTCTGCCATGGCTCTGCTCTTGCCAAACACTTCCACATGT  
 GACCATATCCAGCAGAGAGAGGGAAAAATGTTGAGCCCCATGAAAATGACTATGACAACAGTCCCACCG  
 CACTATCTCGGATAAGTAGTCCCAATTCGGATCGATTTCAAAATCCAGTTTGATCCTAGCTAAAGACTA  
 TCTGATTCGGATATATCTCCTCATCAGACAGCAGGAGACCACCTACTGTCTCTCCAACTGCTTTGGC  
 TCTACCGGCAGTATTTGACAAGCATGCTTACACATTAAGTGGATATGCCCTGGAGCATTATATGACA  
 GCGAAACCATTAGAACTATTCTTGGGCTGTAATGGCTCACACTTTGATGTAACCTCCCATCTGAGGAT  
 GCAACCAGACCCAGCACAAAGGACACAAGGGAACATCTGTTATAATAACCAACGGAAGC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG222805 representing NM\_005068  
 Red=Cloning site Green=Tags(s)

MKEKSKNAARTREKENSEFYELAKLLPLPSAITSQLDKASIIRLTTSYLKMRVVFPEGLGEAWGHSRT  
 SPLDNVGRELGSHLLQTLDFGIFVVAPDGKIMYISETASVHLGLSQVELTGNISIEYIHPADHDEMTAVL  
 TAHQPYHSHFVQYEYIERSFFLRMKCVLAKRNAGLTCGGYKVIHCSGYLKRQYSLDMSPFDGQYQNVGL  
 VAVGHSLPPSAVTEIKLHSNMFMRASLDMKLIIFLDSRVAELTGYPQDLIEKTLYHHVHGCDTFHLRCA  
 HHLLLVKGQVTTKYRFLAKHGGWVWVQSYATIVHNSRSSRPHCIVSVNYVLTDEYKGLQLSLDQISAS  
 KPAFSYTSSSTPTMTDNRKGAKSRLSSSKSRTSPYPQYSGFHTERSESDHDSQWGSPLTDTASPQLL  
 DPADRPQSQHDASCAYRQFSDRSSLCYGFALDHSRLEVEERHFHTQACEGGRCEAGRYFLGTPQAGREPWW  
 GSRAALPLTKASPESREAYENSMPHIASVHRIHGRGHWEDESVVSSPDPGSASESGDRYRTEQYQSSPHE  
 PSKIETLIRATQQMIKEEENRLQLRKAPSDQLASINGAGKKHSLCFANYQQPPTGEVCHGSALANTSPC  
 DHIQQREGKMLSPHENDYDNSPTALSRISSPNSDRISKSSLILAKDYLHSDISPHQTAGDHPTVSPNCFG  
 SHRQYFDKHAYTLTGYLEHLYDSEIRNYSLGCNGSHFDVTSHLRMQPDPAQGHKGTSVIITNGS

TRTRPLE - GFP Tag - V

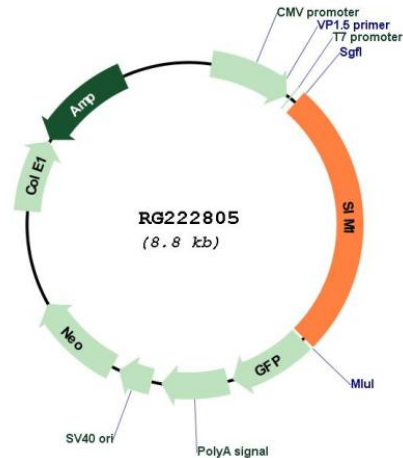
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



## Plasmid Map:



ACCN: NM\_005068

ORF Size: 2298 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).

|                               |  |
|-------------------------------|--|
| <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>                | <a href="#">NM_005068.3</a>  |
| <b>RefSeq Size:</b>           | 3995 bp  |
| <b>RefSeq ORF:</b>            | 2301 bp  |
| <b>Locus ID:</b>              | 6492   |
| <b>UniProt ID:</b>            | <a href="#">P81133</a>   |
| <b>Cytogenetics:</b>          | 6q16.3   |
| <b>Protein Families:</b>      | Druggable Genome, Transcription Factors  |
| <b>Gene Summary:</b>          | SIM1 and SIM2 genes are Drosophila single-minded (sim) gene homologs. SIM1 transcript was detected only in fetal kidney out of various adult and fetal tissues tested. Since the sim gene plays an important role in Drosophila development and has peak levels of expression during the period of neurogenesis, it was proposed that the human SIM gene is a candidate for involvement in certain dysmorphic features (particularly the facial and skull characteristics), abnormalities of brain development, and/or cognitive disability of Down syndrome. [provided by RefSeq, Jul 2008] |