

## Product datasheet for **RG217892**

### **SIM2 (NM\_005069) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	SIM2 (NM_005069) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SIM2
Synonyms:	bHLHe15; HMC13F06; HMC29C01; SIM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG217892 representing NM\_005069  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGAAGGAGAAGTCCAAGAATGCGGCCAAGACCAGGAGGAGAAGGAAAATGGCGAGTTTTACGAGCTTG  
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 GAGCTACCTGAAGATGCGCGCCGCTTCCCGAAGGTTTAGGAGACGCGTGGGGACAGCCGAGCCGCGCC  
 GGGCCCTGGACGGCGTCGCAAGGAGCTGGGATCGCACTTGTGCAGACTTTGGATGGATTTGTTTTTG  
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 GGAGCTCACGGGCAACAGTATTTATGAATACATCCATCCTTCTGACCACGATGAGATGACCGCTGCCTC  
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 GCAGGACCTGATCGAGAAGACCTATACCATCACGTGCACGGCTGCGACGTGTTCCACCTCCGCTACGCA  
 CACCACCTCCTGTTGGTGAAGGGCCAGGTACCACCAAGTACTACCGGCTGCTGTCCAAGCGGGCGGGCT  
 GGGTGTGGGTGCAGAGCTACGCCACCGTGGTGCACAACAGCCGCTCGTCCCGGCCCACTGCATCGTGAG  
 TGTC AATTATG TACTCACGGAGATTGAATACAAGGAACCTCAGCTGTCCCTGGAGCAGGTGCCACTGCC  
 AAGTCCCAGGACTCCTGGAGGACCGCTTGTCTACCTACAAGAACTAGGAAATAGTGAACCCAAAA  
 ATACCAAGATGAAGACAAAGCTGAGAACAACCCCTTACCCCCACAGCAATACAGCTCGTTCCAAATGGA  
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 AACTGCTAGGCACAGCCTGGTCCAAGCTACGAAGCGCCCGCCGCGCCGCTGCGCAGGTTCCGGCAGGA  
 CACCGCGCCCCGAGCTTCCCGAGCTGCGGCCACTACCGCAGGAGCCCGCGCTGGGCCCGGCAAAAGCC  
 GCCCGCCAGGCCCGCCGGACGGGGCGCGCTGGCGCTGGCCCGCGCGGCACCCGAGTGTGCGCGCCCC  
 CGACCCCGAGGCCCGCGCGCGCGGCGCAGCTGCCCTTCGTGCTGCTCAACTACCACCGCGTGTGGC  
 CCGGCGCGGACCGCTGGGGGGCGCCGACCCCGCCCTCCGGCCTGGCCTGCGCTCCCGGCGGCCCGAG  
 GCGGCGACCGGCGCGCTGCGGCTCCGGCACCCGAGCCCGCGCCACCTCCCGCCCGGCGCGCCCTGCG  
 CGCACTACCTGGGCGCCTCGGTCATCATACCAACGGGAGG

AC**GGGCCGCT**CGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG217892 representing NM\_005069  
 Red=Cloning site Green=Tags(s)

MKEKSKNAAKTRREKENGEFYELAKLLPLPSAITSQLDKASIIRLTTSYLKMRVFPPEGLGDAWGQPSRA  
 GPLDGVAKELGSHLLQTLDFGVFVVASDVKIMYISETASVHLGLSQVELTGNISIEYIHPDHDHMTAVL  
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 VAVGQSLPPSAITEIKLYSNMFMFRASLDLKLIFLDSRVTEVTXYEPQDLIEKTLYHHVHGCDVFLRYA  
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 KSQDSWRTALSTSQETRKLVKPKNTKMKTKLRITNPYPYPPQYSSFMQDKLECGQLGNWRASPPASAAAPPE  
 LQPHSESSDLLYTPSYSLPFSYHYGHFPLDSHVS SSKKPM LPAKFGQPQGSPCEVARFFLSTMPASGECQ  
 WHYANPLVSSSSPAKNPPEPPANTARHSLVPSYEAPAAAVRRFGEDTAPPSFPCGPHYREEPALGPAKA  
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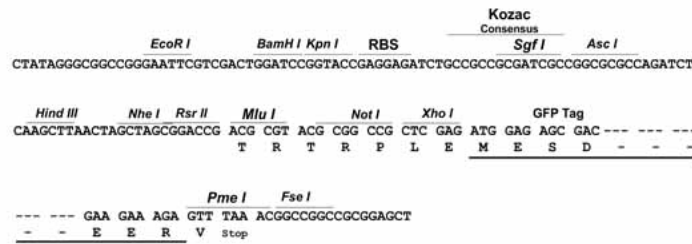
TRPLE - GFP Tag - V

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja1754\\_h06.zip](https://cdn.origene.com/chromatograms/ja1754_h06.zip)

**Restriction Sites:** SgfI-NotI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



**ACCN:** NM\_005069

**ORF Size:** 2001 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\\_005069.2](#), [NP\\_005060.1](#)

**RefSeq Size:** 3885 bp

**RefSeq ORF:** 2004 bp

**Locus ID:** 6493

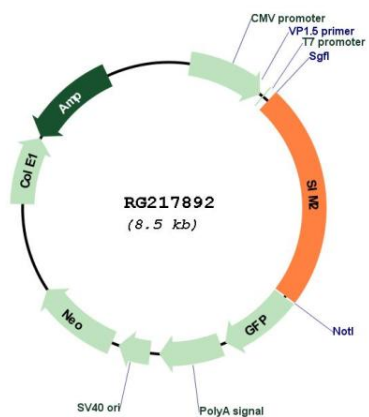
**UniProt ID:** [Q14190](#)

**Cytogenetics:** 21q22.13

**Protein Families:** Druggable Genome, Transcription Factors

**Gene Summary:** This gene represents a homolog of the Drosophila single-minded (sim) gene, which encodes a transcription factor that is a master regulator of neurogenesis. The encoded protein is ubiquitinated by RING-IBR-RING-type E3 ubiquitin ligases, including the parkin RBR E3 ubiquitin protein ligase. This gene maps within the so-called Down syndrome chromosomal region, and is thus thought to contribute to some specific Down syndrome phenotypes. Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, Sep 2014]

Product images:



Circular map for RG217892