

## Product datasheet for **RC216257**

### **SIM2 (NM\_009586) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	SIM2 (NM_009586) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SIM2
Synonyms:	bHLHe15; HMC13F06; HMC29C01; SIM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC216257 representing NM\_009586  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAAGGAGAAGTCCAAGATGCGGCCAAGACCAGGAGGAGAAGGAAAATGGCGAGTTTTACGAGCTTG  
 CCAAGCTGCTCCCGTCCGCTCGGCCATCACTTCGCAGCTGGACAAAGCGTCCATCATCCGCTCACCAC  
 GAGCTACCTGAAGATGCGCGCCGCTTCCCGAAGGTTTAGGAGACGCGTGGGGACAGCCGAGCCGCGCC  
 GGGCCCTGGACGGCGTCGCAAGGAGCTGGGATCGCACTTGTGCAGACTTTGGATGGATTTGTTTTTG  
 TGGTAGCATCTGATGGCAAAATCATGTATATATCCGAGACCGCTTCTGTCCATTTAGGCTTATCCCAGGT  
 GGAGCTCACGGGCAACAGTATTTATGAATACATCCATCCTTCTGACCACGATGAGATGACCGCTGCCTC  
 ACGGCCACCAGCCGCTGCACCACCACCTGCTCCAAGAGTATGAGATAGAGAGGTCGTTCTTTCTCGAA  
 TGAATGTGTCTTGGCGAAAAGAACCGGGCCCTGACCTGCAGCGGATACAAGGTCATCCACTGCAGTGG  
 CTACTTGAAGATCAGGCAGTATATGCTGGACATGTCCCTGTACGACTCCTGTACCAGATTGTGGGGCTG  
 GTGGCCGTGGGCCAGTCGCTGCCACCCAGTGCCATCACCGAGATCAAGCTGTACAGTAACATGTTTATGT  
 TCAGGGCCAGCCTTGACCTGAAGCTGATATTCCTGGATTCCAGGGTGACCGAGGTGACGGGTACGAGCC  
 GCAGGACCTGATCGAGAAGACCTATACCATCACGTGCACGGCTGCGACGTGTTCCACCTCCGCTACGCA  
 CACCACCTCCTGTTGGTGAAGGGCCAGGTACCACCAAGTACTACCGGCTGCTGTCCAAGCGGGCGGGCT  
 GGGTGTGGGTGCAGAGCTACGCCACCGTGGTGCACAACAGCCGCTCGTCCCGGCCCACTGCATCGTGAG  
 TGTCAATTATGTACTCACGGAGATTGAATAACAAGAACTTACGCTGTCCCTGGAGCAGGTGCCACTGCC  
 AAGTCCCAGGACTCCTGGAGGACCGCTTGTCTACCTCACAGAAACTAGGAAATAGTGAACCCAAAA  
 ATACCAAGATGAAGACAAAGCTGAGAACAACCCCTTACCCCCACAGCAATACAGCTCGTTCCAAATGGA  
 CAAACTGGAATGCGGCCAGCTCGGAAACTGGAGAGCCAGTCCCCCTGCAAGCGCTGCTGCTCCTCCAGAA  
 CTGCAGCCCACTCAGAAAGCAGTGACCTTCTGTACACGCCATCCTACAGCCTGCCCTTCTCCTACCATT  
 ACGGACACTTCCCTCTGGACTCTCACGTCTCAGCAGCAAAAAGCCAATGTTGCCGGCAAGTTCGGGCA  
 GCCCAAGGATCCCCTTGTGAGGTGGCACGCTTTTCTGAGCAGACTGCCAGCCAGCGTGAATGCCAG  
 TGGCATTATGCCAACCCCTAGTGCCTAGCAGCTCGTCTCAGCTAAAAATCCTCCAGAGCCACCGGCGA  
 AACTGCTAGGCACAGCCTGGTCCAAGCTACGAAGTGGGTGAGTCTGCTCGTGGGAAGGTGGGAGG  
 ACTGCGCACGGCCGGGAGCCGAAGCAGCCATGGCGGTGGGTGGCAGATGGAGACAGAACCCTCACGCTT  
 GGCAAACTTGCCTCTTCTGCTTCTAAG

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC216257 representing NM\_009586  
 Red=Cloning site Green=Tags(s)

MKEKSKNAAKTRREKENGFEYELAKLLPLPSAITSQLDKASIIIRLTTSYLKMRVFPPEGLDAWQPSPRA  
 GPLDGVAKELGSHLLQTLDFVVFVVASDGKIMYISETASVHLGLSQVELTGNISIEYIHPDHDDEMTAVL  
 TAHQPLHHLLQEYIEIERSFFLRMKCVLAKRNAGLTCSGYKVIHCSGYLIRQYMLDMSLYDSCYQIVGL  
 VAVGQSLPPSAITEIKLYSNMFMFRASLDLKLIFLDSRVTEVTGYEPQDLIEKTLYHHVHGCDFVHLRYA  
 HHHLLVKGQVTTKYRLLSKRGGWVWVQSYATVVHNSRSPHCVSVNYVLTIEYKELQLSLEQVSTA  
 KSQDSWRTALSTSQETRKLVKPKNTKMKTKLRTNPPYQQYSSFQMDKLECGQLGNWRASPPASAAAPPE  
 LQPHSESSDLLYTPSYSLPFSYHYGHFPLDSHFVSSKKPMLPAKFQPGQSPCEVARFFLSTLPASGECQ  
 WHYANPLVPSSSPAKNPPEPPANTARHSLVPSYEGGSGLLVGKVGGLRTAGSRSSHGGGWQMETEPSRF  
 GQTCPLSASK

SGP**TRTRRLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6808\\_g12.zip](https://cdn.origene.com/chromatograms/mk6808_g12.zip)

**Restriction Sites:**

Sgfl-RsrII

**Cloning Scheme:**


**ACCN:** NM\_009586

**ORF Size:** 1710 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\\_009586.5](#)

**RefSeq Size:** 2823 bp

**RefSeq ORF:** 1713 bp

**Locus ID:** 6493

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

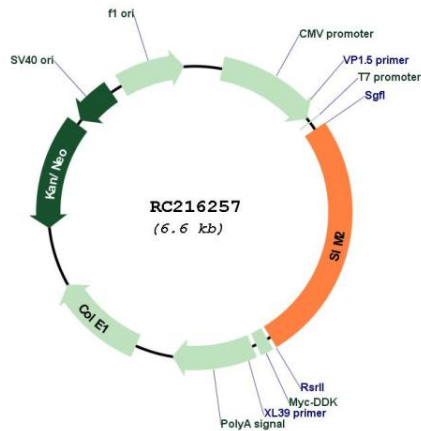
**Cytogenetics:** 21q22.13

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

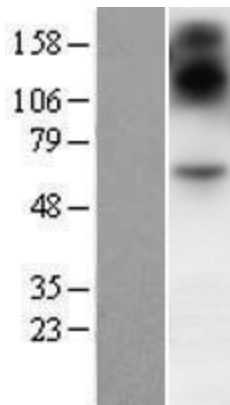
**MW:** 63.3 kDa

**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 RC216257



Western blot validation of overexpression lysate (Cat# [LY416004]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216257 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).