

## Product datasheet for **MG211250**

### Smcr8 (BC085095) Mouse Tagged ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                     |
| Product Name:             | Smcr8 (BC085095) Mouse Tagged ORF Clone |
| Tag:                      | TurboGFP                                |
| Symbol:                   | Smcr8                                   |
| Synonyms:                 | 2310076G09Rik; AI642055; D030073L15Rik  |
| Mammalian Cell Selection: | Neomycin                                |
| Vector:                   | pCMV6-AC-GFP (PS100010)                 |
| E. coli Selection:        | Ampicillin (100 ug/mL)                  |



[View online »](#)

**ORF Nucleotide Sequence:**

>MG211250 representing BC085095  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGATCAGCGCCCCTGATGCGGTGGCCTTACCAAGGAAGATGAATACGAGGAAGAACCTTACAATGAGC  
 CCGCTTTGCTGAGGAGTACTCAGTCCCTCTTTCTTTATGCCAGCCAGGGGGCAAACCCCTGGTCTAA  
 ACTGTCTGGGGCCAAGTTCTCCAGGGACTTCATCCTCATTCCGAGTTCTCTGAGCAGGTGGGACCCAG  
 CCCTTGCTTACCATCCCCAATGACACCAAAGTTTTTGGCACTTTTGATCTTAATTACTTCTTTTGGCGA  
 TTATGTGCGGTGGATTACCAGGCTTCATTCGTAGGCCATCCTCCCGTTCTGCCTACCCCAAGTTGAACTT  
 TGTGGAAGACTCTAAAGTGGTACTGGGAGACTCTAAGGAAGGGGCTTTGCATATGTGCACCACCTCACC  
 TTGTACGACTGGAGGCCAGGGCTTTGTGAGGCCCTTTGTATGGCTTATATCTCCGAGACCAGCATA  
 AAATCATGCAGCAGTCCAAGAGCTCTCGGCCGAATTTTCAAAGCATCTGAGTGCTTGAGATGGGCAA  
 CAGGAAGGCATTGCTGGGGAATTGAAAAAAGCTGAAAGACTTGGATTACACAAGGACAGTGCTACAC  
 ACAGAAAACCGAGATCCAGAAGAAAGCCAACGACAAGGGTTTTTATTCTTCTCAGGCGATTGAGAAAGCCA  
 ATGAACTGGCCAATGTGGAGAAGTCCATCATCGAACATCAAGATTTGCTGAGGCAGATCCGCTCATACCC  
 TCGTCAGAAGACGAAGATCCCTGACTTGCAGCCTGGTGATACAGAGCATACCCAGGATCAGGCTGACCAG  
 GTATCCACTACCTCTAATCCTGAGGAGTCCGCTAATGCAGACCTTTATACCTGCAGACCGGCTTACACCC  
 CCAAACCTCATCAAAGCAAAGTCCACCAAGTGTTTTGACAAGAAGTTGAAGACCTTGAGGAACTCTGTGA  
 CACTGAGTATTTCACTCAGACCTGGCCAGCTTAGCCACATTGAACACATGTTTCAGAGGAGACCTGTGC  
 TACCTCTGACCAGTCAGATTGACAGAGTGCTTCGAAAACAACAGCCATAACGAATTTCTCTTTGAAG  
 ATTTTGTAGAGGTGGATGACAGGATGGAAGCAAGAGAATGTACCCTCTCAGCCAGTCAGGACGAGCAGT  
 GCCTCCCAAGCCTGTAGAAGAATGCCCAATTCCTAAAGTGTAAATTAGCGTTGGCTTTACAAGTCCAGT  
 GTGGAGTCTGTATTGATCAAGATGGAGCAGGAAGTGGCGATGAAGAGTACACGGGGGTGGAGGCAACAG  
 AGGCACGCAGTTTTGACCCCAAGAGAAGTGGACTACCTGGATATGGATATGAAAGGGAGCATCAGTAG  
 TGGGGAAGCATTGAGGTGCTGGGCACCGAGAAGTCAGCCTCTGTGTTGTCGAAATCTGACAGCCAGGCC  
 AGCCTCACCGTGCCATTGAGCCCCATGTAGTCCGTAGCAAAGCGGTGAGCCACAGGACAATCAGCGAGG  
 ACAGCATTGAAGTCTTAAGTACCTGCCCTTCTGAGGCCCTCATTCTGATGACTTAAAGGCCAGTTACCC  
 AAGTGCCATTAAATGAAGAAGAAGCCTATGCGGATAATGAGGGGGCCATCCATTTCCAGGCAAGTGCCGGC  
 TCACCAGAACCGGATGAGACTCAGGAGGGCAACTTGAAAAATATCCCATCCCAAATAGACTCCAGCTGCT  
 GTATTGAAAGGAGAGTGAAGGTCACTTGGTGCCTCTCCCAACCCAGCCTACACTCTTTCTGATGAGGA  
 CAGTGTGGTGAAGTCCCCACAGCGCTACATACAGAAGGACCAGGGGCTCCACGTGGACTTCGGAGTG  
 GAAAACACTGACCCTTCTCCCGGAGACAACAGTTGTGAAATGTTCCAGCTTATGAGCTGGATCCAAGCT  
 GCCTTCTGGCTAGCCGAGATGTTAGTAAGATGAGCCTGGATAACTACTCGGATACCACTAGCTACATGGG  
 CAGTGGCGCTCTACCAGCTCAGACAGAATCCCTCAGCACCTCCTGCTGGCCTATCCTCTGAGAGGCAC  
 AAAAAGAGAGCTGGCCAGAATGCCTTAAAATTCATCCGCCAGTACCCTTTGCCCCACCCAGCCATCTACT  
 CCCTGCTCAGTGGGAGGACACTTGTGGTCTGGGCGAAGATGAAACCATTGTGAGGAAGCTGGTACTGC  
 ACTGCCATCTTTGTTCCCAACTATGGCTGCTATGCCAAGCCGGTGAAGCACTGGATTTCTCCCCTTTG  
 CATATTATGGATTTCCAGAAGTGAAGCTTATTGGCCTACAAGAGTGGCCTCTCCTGCCAATGTGGGTA  
 CCCTCCATACCCTGAGCCGTTACAGCCGTTATACAAGCATCCTGGACCTGGACAGCAAGACCCTACGCTG  
 TCCCTATACAGGGGTACTACTGGTACCCCGCTGGCTGACCATCGCACTCAGATCAAGCGGGGCAGCACA  
 TACTACCTTACGTCCAGAGCATGCTCACCCAGCTCTGCTCCAAGGCATTCTCTACACCTTTTGTACC  
 ACTTGCATCTGCCCGCCACAGTGAGGAGACACAAGAAGCAGTGGCCAGCAGACAAACCAGCTTCTCTAAA  
 GCTAAACCTGGGGCTCGTGAACGAGGACATCAGAGTGGTACAGTACCTGGCTGAGCTGTTGAAACTGCAC  
 TATATGCAGGAGTACCCGGGACCACCCACCCACTGCTCAGGTTTACTACGTCCCAGCTTTTTGTACA  
 AAATC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

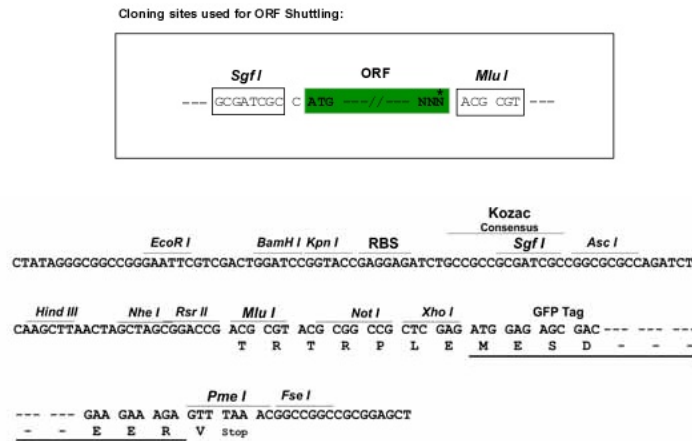
**Protein Sequence:** >MG211250 representing BC085095  
 Red=Cloning site Green=Tags(s)

MISAPDAVAFTKEDEYEEEPYNPALPEEYSVPLFPYASQGANPWSKLSGAKFSRDFILISEFSEQVGPQ  
 PLLTIPNDTKVFGTDFLDNYFSLRIMSDVDYQASVGHPPGSAYPKLNVEDSKVVLGDSKEGAFAYVHHLT  
 LYDLEARGFVRPFCMAYISADQHKIMQQFQELSAEFKASECLKMGNRKAFAGELEKCLKDLDYTRTVLH  
 TETEIQKKANDKGFYSSQAIEKANELANVEKSIIEHQDLLRQIRSYPRQTKIPDLQPGDTEHTQDQADQ  
 VSTTSNPEESANADLYTCRPAYTPKLIKAKSTKCFDKLKTLEELCDTEYFTQTLAQLSHIEHMFGRDLC  
 YLLTSQIDRVLRKQPITNFLFEDFVEVDDRMEKQENVPSPQSDRLPPKPVEECPKPKVLI SVGSYKSS  
 VESVLIKMEQELGDEEYTGVEATEARSFDPQENLDYLDMDMKGSISSGESIEVLGTEKSASVLSKSDSQA  
 SLTVPLSPHVRSKAVSHRTISEDSIEVLSTCPSEALIPDDFKASYPSAINEEEAYADNEGAIHFQASAG  
 SPEPDETQEGNLENIPSQIDSSCCIGKESEGLVPLPTPAYTLSEDSVSVIPPQRYIQKDQGLHVDFGV  
 ENTDPSPRDNCEMFPAYELDPSCLLASRDVSKMSLDNYSDDTTSYMGSAASTSSDRIPSAPPAGLSSERH  
 KKRAGQNALKFIHQYPAHPAIYSLLSGRTLVVLGEDETVRKLVTALSIFVPNYGCYAKPVKHWISSPL  
 HIMDFQKWLIGLQRVASPVNVTGLHTLSRYSRYTSILDLDLSDKTLRCPLYRGTLVPRADHRTQIKRGST  
 YYLHVQSMILTQLCSKAFLYTFCHHLHLPASHSEETQEAVASRQTSFLKLNGLVNERVQYLAELLKLV  
 YMQESPGTTHPLLRFDYVPSFLYKI

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

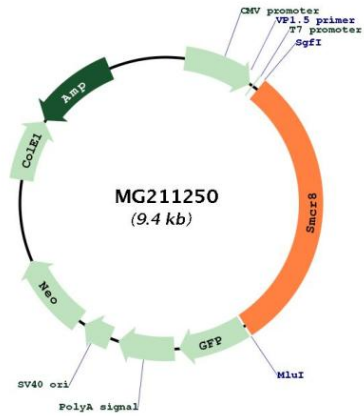


**ACCN:** BC085095

**ORF Size:** 2807 bp

|                               |  |
|-------------------------------|--|
| <b>OTI Disclaimer:</b>        | 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. <a href="#">More info</a>   |
| <b>OTI Annotation:</b>        | This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.   |
| <b>Components:</b>            | 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="#">BC085095</a> , <a href="#">AAH85095</a>  |
| <b>RefSeq Size:</b>           | 3049 bp  |
| <b>RefSeq ORF:</b>            | 2807 bp  |
| <b>Locus ID:</b>              | 237782   |
| <b>Cytogenetics:</b>          | 11 B2  |
| <b>Gene Summary:</b>          | Component of the C9orf72-SMCR8 complex, a complex that has guanine nucleotide exchange factor (GEF) activity and regulates autophagy (PubMed:27617292). In the complex, C9orf72 and SMCR8 probably constitute the catalytic subunits that promote the exchange of GDP to GTP, converting inactive GDP-bound RAB8A and RAB39B into their active GTP-bound form, thereby promoting autophagosome maturation (By similarity). The C9orf72-SMCR8 complex also acts as a negative regulator of autophagy initiation by interacting with the ATG1/ULK1 kinase complex and inhibiting its protein kinase activity (PubMed:27617292). Acts as a regulator of mTORC1 signaling by promoting phosphorylation of mTORC1 substrates (By similarity). In addition to its activity in the cytoplasm within the C9orf72-SMCR8 complex, SMCR8 also localizes in the nucleus, where it associates with chromatin and negatively regulates expression of suppresses ULK1 and WIPI2 genes (By similarity).[UniProtKB/Swiss-Prot Function] |

Product images:



Circular map for MG211250