

## Product datasheet for **RN212682**

### **Smarcal1 (NM\_001108222) Rat Untagged Clone**

#### **Product data:**

|                    |  |
|--------------------|--|
| Product Type:      | Expression Plasmids                        |
| Product Name:      | Smarcal1 (NM_001108222) Rat Untagged Clone |
| Tag:               | Tag Free                                   |
| Symbol:            | Smarcal1                                   |
| Vector:            | pCMV6-Entry (PS100001)                     |
| E. coli Selection: | Kanamycin (25 ug/mL)                       |
| Cell Selection:    | Neomycin                                   |



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**Fully Sequenced ORF:** >RN212682 representing NM\_001108222  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGTCCTTGCCACTTACGGAGGAGCAGAGGAAAAAGATTGAAGAGAATCGGCAGAAGGCTTTGGCCCGTC  
 GAGCTGAGAAGCTATGGGCAGAACAGCCCAGAGTACAGCTTACAGCTCCAGTGCCTGCCAGGCCGTCCCA  
 GTGCAAGCAGAACTCTCTCCTGAATCTCCAGCGGAGCCTTCAAAGCCAGAGGGCCATGCTACCATTTCC  
 AAGGGACAGAATCTCAATAATCACTCCCTGCTGCTCAGAGACCTCACAGCTCCCCTGTTTTCAACCCA  
 GCACAGCAGAGGAAGCAAAGGGACTATGGAAGAGCGAAGGAAAGATGTCCGCAGCCTGCCAAACCCAAG  
 TCCCCAGAAGTCTTAACCAACAGCTTTTGGGTAGTAAATCCAGTGAGGGTCATCCCAGGCAACCCAG  
 GACACAGCAGCTTCTGTCTAGACCATTTCCAGGGATCCCAAGTTAGAGGCCAAGGCAGGGAGGCCCT  
 CCACCTCTGGACAGAGCATTTCCGACACCTTTTATGCCTTAGGGGAAAAAACACCTAAGACAGATGGGAG  
 ACCCGCAAAGGCACTGCAGACCTCACCCAAAAAGCAAGCTGTCTACGGGAATGTGCTTAAGGACAGGG  
 GATCGCTTCCGGGTAAAGATCGGCTACAACAAGGAGCTCATTGAGGTGTTAAGTCTCTGCCAGCAGAC  
 GCTATGATTCTGTTACGAAGACGTGGGACTTCAGCATGAGTGACTACAGAGCCTTGATGAAGGCCGTGCA  
 GCGACTCTCCACGGTCTCCCTTCAGCCATTGGAAGAGGTGATGGCACTGGGGGACAGACCAGCCTCCCC  
 TCAGCTCCATCCCTTACCTTTGTACAGGGAGATGCATGCTCATTCCCAGCCCGCTTCGAGGTTGACA  
 TCGGCTATTCTGAGGTGGTGATTGCCCTGTTAAGCAGATGGAGTCCAGGAATTACGATCCGAAGACCAG  
 GAAGTGGAACTTTCTCTTGAAGAGCACAACTAATTGCAAGTCCCGTGAGCTCAAGCAAGTCCAG  
 CTGGACCTCTGCCAAGACCTTGACCTGGCATTGTCATCTCAGCTGGAGAAAACGCTCTCTCCAATCGA  
 AAGCAGATGTGCCAGAAGCTGACCTTTCTGGAGTGGATGCCAAGCTTGTGTCTAACCTCATGCCCTTCA  
 GAGAGAGGGAGTTAGCTTTGCCATATCAAAAAGAGGCCCGCTGCTACTTGCCGATGACATGGGCCTAGGG  
 AAGACCATCCAAGCCATCTGCATAGCAGCTTTTTACGAAAGGAATGGCCACTGCTGGTGGTTGTGCCTT  
 CCTCTGTGCGCTTACCTGGGAGCAGGCCCTTCTGCGATGGCTTCCATCACTTAGCCAGAGGACATCAA  
 CGTGGTGGTGACTGGGAAGGGCCGCTAACAGCTGGCTTGGTCAACATTGTGAGCTTTGACCTTCTGAGC  
 AAGTTGGAGAAGCAGCTAAAAACCCCTTCAAAGTCGTCAATTATTGATGAATCGCACTTCTCAAAAACA  
 TCAAGACTGCCGATGCCGAGCAGCTGTGCTATCCTAAAGTTGCCAAGAGGGTATCCTGCTGTGCGG  
 CACACCTGCCATGTGAGGCCTGCAGAGCTCTACACACAGATCATTGCTGTCAAGCCAACCTTCTCCCT  
 CAGTTTCAATGCTTTCGGACTGCGCTACTGTGATGCCAAGCGGCTCCCTTGGGGCTGGGACTACTCGGGCT  
 CCTCCAACCTGGGTGAGCTGAAGCTGCTGCTGGAGGAGGAGTCAATGCTGCGGGCGCTCAAATCTGATGT  
 CCTTCCAGCTTCCAGCCAAGCAACGCAAGATGGTGGTGGTCAACCCTGGTCCGATCAGCACCAGGGCT  
 AAGGCAGCCCTGGATGCAGCAGCCAAAGAAATGACCAAGGACAAAATAAACAGCAGCAGAAGGAAGCTC  
 TCCTTGTCTTCTTCAACAGAACAGCAGAAGCTAAAATCCCATGTGTATCGAATATATCCTGGACCTTCT  
 GGAGAGCGGGCGAGAGAAGTTTCTAGTGTGTCACACCATAAGGTGCTTCTGGATGCGATTGCTAAGGAA  
 CTTGAGAGGAAGAATGTTACGCACATCCGATTGATGGCTCCACGCCCTGTCAGACCGGGAGGATCTGT  
 GCCAGCAGTTCAGCTGTCCAAAGGACATACGGTGGCAGTGTGTCCATCACAGCCGCCAACATGGGCCT  
 CACCTTCTCCTCGGCTGATCTGGTGGTGTGCTGAGCTGTTTTGGAACCCGGGGTGTGATCCAGGCC  
 GAGGACCGGTGCACCGCATTTGGACAGACAACTCTGTGGCATCCACTACCTGGTGGCAAAGGCACCG  
 CAGATGACTACCTCTGGCCTCTGATTCAAGAGAAGATTAAAGTCTGGGGAAAGCTGGGCTTCTGAGAC  
 CAATTTCTCAGAAATGACAGAAGCTACTGACTACCTCTACAAGGACCCAAAAAGAGACGATCTATAGC  
 CTGTTCCAGCAGTCTTTCGAAGACGATGGGAATGACATGGAATTCCTGGAGGCAGCAGATCCTTTGAAC  
 TAGGAAGTACTTCAGGGACCTCTGGAAATAGCTCGCAGGAGCTAGGAGATATCACAGATGAGAACGCCTT  
 GGCAGACAGCCCAAAAGAAAAGGAGATTTGAATCTTTGATAATTGGGACAGCTTTACCTCTCCCTTT  
 TGA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

|                               |   |
|-------------------------------|---|
| <b>ACCN:</b>                  | NM_001108222  |
| <b>Insert Size:</b>           | 2733 bp   |
| <b>OTI Disclaimer:</b>        | Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).  |
| <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>                | <u><a href="#">NM_001108222.1</a></u> , <u><a href="#">NP_001101692.1</a></u>   |
| <b>RefSeq Size:</b>           | 3041 bp   |
| <b>RefSeq ORF:</b>            | 2733 bp   |
| <b>Locus ID:</b>              | 316477  |
| <b>UniProt ID:</b>            | <u><a href="#">B4F769</a></u>   |
| <b>Cytogenetics:</b>          | 9q33  |
| <b>Gene Summary:</b>          | ATP-dependent annealing helicase that binds selectively to fork DNA relative to ssDNA or dsDNA and catalyzes the rewinding of the stably unwound DNA. Rewinds single-stranded DNA bubbles that are stably bound by replication protein A (RPA). Acts throughout the genome to reanneal stably unwound DNA, performing the opposite reaction of many enzymes, such as helicases and polymerases, that unwind DNA. May play an important role in DNA damage response by acting at stalled replication forks (By similarity).<br>[UniProtKB/Swiss-Prot Function] |