

Product datasheet for **MC222720**

Smcr8 (NM_001085440) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Smcr8 (NM_001085440) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Smcr8
Synonyms:	2310076G09Rik; AI642055; D030073L15Rik
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >MC222720 representing NM_001085440
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGATCAGCGCCCCTGATGTGGTGGCCTTACCAAGGAAGATGAATACGAGGAAGAACCTTACAATGAGC
 CCGCTTTGCTGAGGAGTACTCAGTCCCTCTTTTCTTATGCCAGCCAGGGGGCAAACCCCTGGTCTAA
 ACTGTCTGGGGCCAAGTTCTCCAGGGACTTCATCCTCATTTCGAGTTCTCTGAGCAGGTGGGACCCAG
 CCCTTGCTTACCATCCCCAATGACACCAAAGTTTTTGGCACTTTTGATCTTAATTACTTCTTTTGGCGA
 TTATGTGGTGGATTACCAGGCTTCATTCGTAGGCCATCCTCCCGTTCTGCCTACCCCAAGTTGAACTT
 TGTGGAAGACTCTAAAGTGGTACTGGGAGACTCTAAGGAAGGGGCTTTGCATATGTGCACCACCTCACC
 TTGTACGACTGGAGGCCAGGGCTTTGTGAGGCCCTTTGTATGGCTTATATCTCCGAGACCAGCATA
 AAATCATGCAGCAGTCCAAGAGCTCTCGGCCGAATTTTCAAAGCATCTGAGTCTTGAAGATGGGCAA
 CAGGAAGGCATTGCTGGGGAATTGAAAAAAGCTGAAAGACTTGGATTACACAAGGACAGTGCTACAC
 ACAGAAACCGAGATCCAGAAGAAAGCCAACGACAAGGGTTTTTATTCTTCTCAGGCGATTGAGAAAGCCA
 ATGAACTGGCCAATGTGGAGAAGTCCATCATCGAACATCAAGATTTGCTGAGGCAGATCCGCTCATACCC
 TCGTCAGAAGACGAAGATCCCTGACTTGCAGCCTGGTGATACAGAGCATACCCAGGATCAGGCTGACCAG
 GTATCCACTACCTCTAATCCTGAGGAGTCCGCTAATGCAGACCTTTATACCTGCAGACCGGCTTACACCC
 CCAAACCTCATCAAAGCAAAGTCCACCAAGTGTGGTGGCAAGAGTTGAAGACCTTGGAGGAACTCTGTGA
 CACTGAGTATTTCACTCAGACCTGGCCAGCTTAGCCACATTGAACACATGTTCCAGAGGAGACCTGTGC
 TACCTCTGACCAGTCAGATTGACAGAGTGTTCGAAAACAACAGCCATAACGAATTTCTCTTTGAAG
 ATTTTGTAGAGGTGGATGACAGGATGAAAAAGCAAGAGAATGTACCCTCTCAGCCAGTCAGGACAGCT
 GCCTCCCAAGCCTGTAGAAGAATGCCCAATTCCTAAAGTGTAAATTAGCGTTGGCTTTACAAGTCCAGT
 GTGGAGTCTGTATTGATCAAGATGGAGCAGGAAGTGGCGATGAAGAGTACACGGGGGTGGAGGCAACAG
 AGGCACGCAGTTTTGACCCCAAGAGAAGTGGACTACCTGGATATGGATATGAAAGGGAGCATCAGTAG
 TGGGGAAGCATTGAGGTGCTGGGCACCGAGAAGTCAAGCTCTGTGTGCGAACTGACAGCCAGGCC
 AGCCTCACCGTGCATTGAGCCCCATGTAGTCCGTAGCAAAGCGGTGAGCCACAGGACAATCAGCGAGG
 ACAGCATTGAAGTCTTAAGTACCTGCCCTTCTGAGGCCCTCATTCTGATGACTTAAAGGCCAGTTACCC
 AAGTGCCATTAAATGAAGAAGAAGCCTATGCGGATAATGAGGGGGCCATCCATTTCCAGGCAAGTGCCGGC
 TCACCAGAACCGGATGAGACTCAGGAGGGCAACTTGGAAAATATCCCATCCAAATAGACTCCAGCTGCT
 GTATTGAAAGGAGAGTGAAGGTCACTTGGTGCCTCTCCCAACCCAGCCTACACTCTTTCTGATGAGGA
 CAGTGTGGTGAAGTCCCCACAGCGCTACATACAGAAGGACCAGGGGCTCCACGTGGACTTCGGAGTG
 GAAAACACTGACCCTTCTCCCGAGACAACAGTTGTGAAATGTTCCAGCTTATGAGCTGGATCCAAGCT
 GCCTTCTGGTAGCCGAGATGTTAGTAAGATGAGCCTGGATAACTACTCGGATACCACTAGCTACATGGG
 CAGTGGCGCTCTACCAGCTCAGACAGAATCCCTCAGCACCTCTGTGGCCTATCCTCTGAGAGGCAC
 AAAAAGAGAGCTGGCCAGAATGCCTTAAAATTCATCCGCCAGTACCCTTTGCCCCACCCAGCCATCTACT
 CCCTGCTCAGTGGGAGGACACTTGTGGTCTGGGCGAAGATGAAACCATTGTGAGGAAGCTGGTACTGC
 ACTGTCCATCTTTGTTCCCAACTATGGCTGCTATGCCAAGCCGGTGAAGCACTGGATTTCTCCCTTTG
 CATATTATGGATTTCCAGAAGTGAAGCTTATTGGCCTACAAGAGTGGCCTCTCCTGCCAATGTGGGTA
 CCCTCCATACCCTGAGCCGTTACAGCCGTTATAACAAGCATCCTGGACCTGGACAGCAAGACCCTACGCTG
 TCCCTATACAGGGGTACTGTTACCCCGCTGGCTGACCATCGCACTCAGATCAAGCGGGGACAGCACA
 TACTACCTTACGTCCAGAGCATGCTCACCCAGCTCTGCTCCAAGGCATTCTCTACACCTTTTGTACC
 ACTTGCATCTGCCCGCCACAGTGAAGGACACAAGAAGCAGTGGCCAGCAGACAACCAGCTTCTCTAAA
 GCTAAACCTGGGGCTCGTGAACGAGGACATCAGAGTGGTACAGTACCTGGCTGAGCTGTTGAACTGCAC
 TATATGCAGGAGTACCCGGGACCACCCACCCACTGCTCAGGTTTACTACGTCCCAGCTTTTTGTACA
 AAATCTAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN:	NM_001085440
Insert Size:	2808 bp
OTI Disclaimer:	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).
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:	<ol style="list-style-type: none">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:	<u>NM_001085440.1</u> , <u>NP_001078909.1</u>
RefSeq Size:	7394 bp
RefSeq ORF:	2808 bp
Locus ID:	237782
UniProt ID:	<u>Q3UMB5</u>
Cytogenetics:	11 B2
Gene Summary:	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]