

Product datasheet for MR223358

Smarcc2 (NM_001114096) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Smarcc2 (NM_001114096) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Smarcc2
Synonyms:	5930405J04Rik
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR223358 representing NM_001114096 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGGTGCGGAAGAAGGACGGCGGCCCAACGTGAAGTACTACGAGGCCGCGGACACCGTGACCCAGT
TCGACAACGTGCGGCTCTGGCTCGGCAAGAACAACAAGAAGTACATAACAAGCAGAACCAGCAACCAACA
GTCTCTGTCCAGCCTGGTGGTGCAGTTGCTCCAGTTTCAGGAAGAGGTTTTGGCAAACATGTCAGCAAC
GCACCGCTTACTAACTGCCGATCAAATGTTTCCTAGATTTCAAAGCAGGAGGATCCCTCTGCCATATTC
TTGAGCTGCCTACAAATTCAGAGTGACCAGGGATGGCGGCGTTACGATTTCCAGAATCCATCAGCGAT
GGACCGCAATGTGAAATGTTTCATGACCATTGAGAAGTCTTGGTACAGAATAATTGCTGTCCAGCACCT
AACATTTTCCTCTGCCGAGAAATGAGCCCAAAGTCTAGGGAAATTAAGACATTGTTAAGAGACACC
AGGGAACCATCTCTGAGGATAAGAGCAATGCCTCCCATGTTGTGTATCCTGTCCAGGGAACCTAGAAGA
AGAGGAATGGGTACGGCCAGTCAAGAGGGATAAACAGGTTCTTCTGCACTGGGGCTACTATCCTGAC
AGCTACGACACGTGGATCCCAGCGAGTGAATTAAGCATCTGTGGAGGACGCTCCCACTCTGAGAAAC
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CGAAGTCAGTGACGACAAAAGCCAGTCTCCCGCAGGAAGAAGATCTCAGCCAAGACGCTGACAGACGAG
GTAACAGCCAGATTCAGACAGACGAGACAAGAAGGGGGCAACTATAAGAAGGGAAGCGCTCTCCCT
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AAAGCGAGGCCACAGAGAAGAGGAACAAGAAGACCTGACAAAAGACATGGATGAGCCCTCTCCAGTCCCA
AACGTGGAAGAGGTGACACTCCCCAAAACAGTCAACACTAAAAGGACTCTGAGTCAGCCCCAGTCAAAG
GCGGCACCATGACTGACCTGGATGAACAGGACGATGAAAGCATGGAGACCACCGCAAGGACGAGGATGA
GAACAGCACGGGCAACAAAGGCGAGCAGACGAAGAACCCGACCTGCATGAGGACAATGTGACCGAGCAG
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GCGGGTGTCTGCGCTATCATGAGGGTCCATGCCTTCTGGAACAGTGGGGTCTTATTAACACCAGG



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TAGATGCTGAGAGCCGACCAACCCCAATGGGGCCTCCACCCACCTCTCACTTCCATGTCTTGGCGGACAC
 ACCATCAGGGCTGGTTCCTCTTCAGCCGAAGCCTCCACAGGGCCGCCAGGTTGATGCTGACACCAAGGCT
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 GGCACAGTACCCTGTGCCACCTCCACAG

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 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR223358 representing NM_001114096
 Red=Cloning site Green=Tags(s)

MAVRKDKGGPNVYEEAADTVTQFDNVRLWLGNKYKYYIQAEPTNKSLSSLVVQLLQFQEEVFGKHVSN
 APLTKLPIKCFDFKAGGSLCHILAAAYKFKSDQGWRRYDFQNP SRMDRNVEMFMTIEKSLVQNNCLSRP
 NIFLCPEIEPKLLGKLDIVKRHQGTISEDKSNASHVVYPVPGNLEEEWVRPVMKRDQVLLHWGYYPD
 SYDTWIPASEIEASVEDAPTPEKPRKVHAKWILD TDTFNEWMNEEDYEVSDDKSPVSRKKISAKLTDE
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 NVEEVTLPKTVNTKDKSEAPVKGGTMDLDEQDDESMETTGDDEDENSTGNKGEQTKNPD LHEDNVTEQ
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 AGDVCAIMRVHAFLEQWGLINYQVDAESRPTPMGPPPTSHFHLVADTPSGLVPLQPKPPQGRQVDADTKA
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 EWTEQETLLLLLEALEMYKDDWNKVSEHVSRTQDECILHFLRLPIEDPYLEDSEASLGPLAYQPIPFSSQS
 GNPVMSTVAFLASVVDPRVASAAKSALEEF SKMKEEVPTALVEAHVRKVEEAAKVTGKADPAFGLLESSG
 IAGTASDEPERIEESGTEEARPEGQAADKKEPKEPREGGAVEEEAKEEISEVPKKDEEKGKEGDSEKE
 SEKSDGDP IVDPEKDKEPTGQEEVLKEVAEPEGERKTKVERDIGENLSTAAAAALAAAAYKAKHLAAV
 EERKIKSLVALLVETQMKKLEIKLRHFEEL ETIMDREREALEYQRQQLADRQAFHMEQLKYAEMRARQQ
 HFQMQHQQQQPPTLPPGSQPIPPGTGAAGPPTVHGLAVPPAAVASAPPGSGAPPGLPSEQIQGAGTT
 AGPQQPQQAGAPQPGAVPPGVPPP GPHGPSFPNPQTPPSMMPGAVPGSGHPGVADPGTLPDPTAPSP
 GTVTPVPPPQ

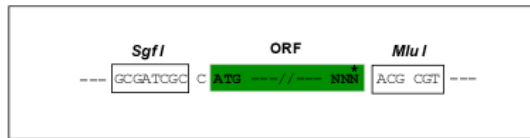
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

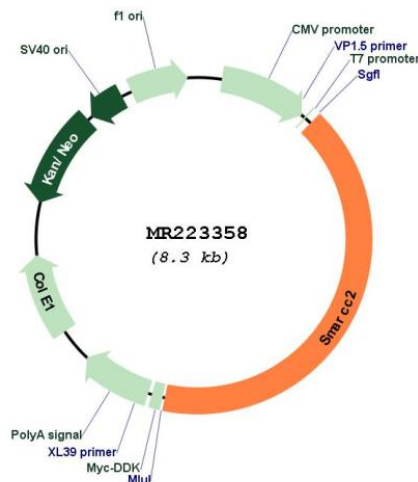
SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:


ACCN: NM_001114096

ORF Size: 3390 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_001114096.1](#), [NP_001107568.1](#)

RefSeq Size: 4715 bp

RefSeq ORF: 3393 bp

Locus ID: 68094

UniProt ID: [Q6PDG5](#)

Cytogenetics: 10 D3

MW: 125.1 kDa

Gene Summary: Involved in transcriptional activation and repression of select genes by chromatin remodeling (alteration of DNA-nucleosome topology). Component of SWI/SNF chromatin remodeling complexes that carry out key enzymatic activities, changing chromatin structure by altering DNA-histone contacts within a nucleosome in an ATP-dependent manner. Can stimulate the ATPase activity of the catalytic subunit of these complexes. May be required for CoREST dependent repression of neuronal specific gene promoters in non-neuronal cells. Belongs to the neural progenitors-specific chromatin remodeling complex (npBAF complex) and the neuron-specific chromatin remodeling complex (nBAF complex). During neural development a switch from a stem/progenitor to a postmitotic chromatin remodeling mechanism occurs as neurons exit the cell cycle and become committed to their adult state. The transition from proliferating neural stem/progenitor cells to postmitotic neurons requires a switch in subunit composition of the npBAF and nBAF complexes. As neural progenitors exit mitosis and differentiate into neurons, npBAF complexes which contain ACTL6A/BAF53A and PHF10/BAF45A, are exchanged for homologous alternative ACTL6B/BAF53B and DPF1/BAF45B or DPF3/BAF45C subunits in neuron-specific complexes (nBAF). The npBAF complex is essential for the self-renewal/proliferative capacity of the multipotent neural stem cells. The nBAF complex along with CREST plays a role regulating the activity of genes essential for dendrite growth (PubMed:17640523). Critical regulator of myeloid differentiation, controlling granulocytopenesis and the expression of genes involved in neutrophil granule formation (PubMed:28369036).[UniProtKB/Swiss-Prot Function]