

## Product datasheet for **RC240168**

### SMARCA2 (NM\_001289397) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SMARCA2 (NM_001289397) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SMARCA2
Synonyms:	BAF190; BIS; BRM; hBRM; hSNF2a; NCBRS; SNF2; SNF2L2; SNF2LA; Sth1p; SWI2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC240168 representing NM_001289397 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGTCCACGCCACAGACCCTGGTGCATGCCACCCAGGGCCTTCGCCGGGGCTGGGCCTTCCCCTG  
GGCCAATCTTGGCCTAGTCCAGGACCAGGACCATCCCAGGTTCCGTCCACAGCATGATGGGGCCAAG  
TCCTGGACCTCCAAGTGTCTCCATCCTATGCCGACGATGGGGTCCACAGACTTCCACAGGAAGGCATG  
CATCAAATGCATAAGCCATCGATGGTATACATGACAAGGGGATTGTAGAAGACATCCATTGTGGATCCA  
TGAAGGGCACTGGTATGCGACCCTCACCCAGGCATGGGCCCTCCCCAGAGTCCAATGGATCAACACAG  
CCAAGTTATATGTCACCACACCCTCTCCATTAGGAGCCCAGAGCACGTCTCCAGCCCTATGTCTGGA  
GGAGGCCCAACTCCACCTCAGATGCCACCAAGCCAGCCGGGGGCCCTCATCCCAGGTGATCCGCAGGCCA  
TGAGCCAGCCCAACAGAGGTCCTCACCTTTAGTCCTGTCCAGCTGCATCAGCTTCGAGCTCAGATTTT  
AGCTTATAAAATGCTGGCCCGAGGCCAGCCCTCCCCGAAACGCTGCAGCTTGCAGTCCAGGGGAAAAGG  
ACGTTGCCTGGCTTGCAACAACAGCAGCAGCAACAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGC  
AGCAGCAACAGCAGCCGACGACGACGCCGCCAACCACAGCAGCAACAACAGCAGCCGGCCCTTGT  
TAACTACAACAGACCATCTGGCCCGGGCCGAGCTGAGCGGCCGAGCACCCCGCAGAAGCTGCCGGTG  
CCCGCGCCCGGGCCGCGCCCTCGCCCGCGCCCCCGCAGCCGCGCAGCCGCGCCGCGCCGAGTGCCTCG  
GGCCCTCAGTGCAGCAGCCGCCCCGGGGCAGCCCTCGCCCGTCTCCAGCTGCAGCAGAAGCAGAGCCG  
CATCAGCCCCATCCAGAAACCGCAAGGCCTGGACCCCGTGAAATTTCTGCAAGAGCGGGAATACAGACTT  
CAGGCCCGCATAGCTCATAGGATACAAGAACTGGAAAATCTGCCTGGCTCTTTGCCACCAGATTTAAGAA  
CCAAAGCAACCGTGAACATAAAGCACTTCGGTTACTCAATTTCCAGCGTCAGCTGAGACAGGAGGTGGT  
GGCCTGCATGCGCAGGGACAGACCCTGGAGACGGCTCTCAACTCAAAGCATACAAACGGAGCAAGCGC  
CAGACTCTGAGAGAAGCTCGCATGACCGAGAAGCTGGAGAAGCAGCAGAAGATTGAGCAGGAGAGGAAAC  
GCCGTCAGAAACACCAGGAATACCTGAACAGTATTTTGCAACATGCAAAAAGATTTAAGGAATATCATCG  
GTCTGTGGCCGAAAGATCCAGAAGCTCTCAAAGCAGTGGCAACTTGGCATGCCAACACTGAAAGAGAG  
CAGAAGAAGGAGACAGAGCGGATTGAAAAGGAGAGAATGCCGGCGACTGATGGCTGAAGATGAGGAGGTT



[View online »](#)

ATAGAAACTGATTGATCAAAAAGAAAGACAGGCGTTTAGCTTACCTTTTGCAGCAGACCGATGAGTATGT  
 AGCCAATCTGACCAATCTGGTTTGGGAGCACAAGCAAGCCAGGCAGCCAAAGAGAAGAAGAAGAGGAGG  
 AGGAGGAAGAAGAAGGCTGAGGAGAATGCAGAGGGTGGGGAGTCTGCCCTGGGACCGGATGGAGAGCCCA  
 TAGATGAGAGCAGCCAGATGAGTGACCTCCCTGTCAAAGTGACTCACACAGAAACCGGAAGGTTCTGTT  
 CGGACCAGAAGCACCCAAAGCAAGTCAGCTGGACGCTGGCTGGAATGAATCCTGGTTATGAAGTTGCC  
 CCTAGATCTGACAGTGAAGAGAGTGATTCTGATTATGAGGAAGAGGATGAGGAAGAAGAGTCCAGTAGGC  
 AGGAAACCGAAGAGAAAATACTCCTGGATCCAAATAGCGAAGAAGTTTCTGAGAAGGATGCTAAGCAGAT  
 CATTGAGACAGCTAAGCAAGACGTGGATGATGAATACAGCATGCAGTACAGTGCCAGGGGCTCCCGATCC  
 TACTACACCGTGGCTCATGCCATCTCGGAGAGGGTGGAGAAAACAGTCTGCCCTCCTAATTATGGGACCC  
 TAAAGCATTACCAGCTCCAGGCGCTGGAATGGATGGTTTCCCTGTATAATAACAACCTGAACGGAATCTT  
 AGCCGATGAAATGGGGCTTGGAAAGACCATACAGACCATTGCACTCATCACTTATCTGATGGAGCACAAA  
 AGACTCAATGGCCCTATCTCATATTGTTCCCTTTGACTCTATACTGGACATATGAATTTGACA  
 AATGGGCTCCTTCTGTGGTGAAGATTTCTACAAGGGTACTCCTGCCATGCGTCGCTCCCTGTCCCCCA  
 GCTACGGAGTGGCAAATCAATGTCTTGTACTACTTATGAGTATATTAAAAAGACAAGCACATTCTT  
 GCAAAGATTCGGTGGAAATACATGATAGTGAGCAGGACCAAGCCACCGAATGAAGAATCACCACGCAAGCTGA  
 CTCAGGTGGACTTAAATGAAGAAGAACTATATTGATCATCAGGCGTCTACATAAGGTGTTAAGACCATT  
 TTTACTAAGGAGACTGAAGAAAGAGTTGAATCCAGCTTCCCGAAAAAGTGAATATGTGATCAAGTGT  
 GACATGTCAGCTCTGAGAAGATTCTGTATCGCCATATGCAAGCCAAGGGGATCCTTCTCACAGATGGTT  
 CTGAGAAAAGATAAGAAGGGGAAAGGAGGTGCTAAGACACTTATGAACACTATTATGCAGTTGAGAAAAAT  
 CTGCAACCACCCATATATGTTTCAGCACATTGAGGAATCCTTTGCTGAACACCTAGGCTATTCAAATGGG  
 GTCATCAATGGGGCTGAAGTGTATCGGGCCTCAGGGAAGTTTGAAGTCTGATCGTATTCTGCCAAAAT  
 TGAGACGACTAATCACCAGAGTGTCTTTTCTGCCAGATGACATCTCTCATGACCATCGTGAGGATTA  
 TTTTGTCTTTCGGAACCTCCTTTACCTACGCTTGTGAGCACCACCAAGTCTGAAGATCGTGTCTGTTG  
 CTGAAGAAATTCATGAACCTGGATCCCAAGTATTCATTTTTCTTGTGAGCACAAGAGCTGGTGGCCTGG  
 GCTTAAATCTTACGGCAGCTGATACAGTGGTCTCTTTGACAGCGACTGGAATCCTCATCAGGATCTGCA  
 GGCCCAAGACCGAGCTCACCGCATCGGGCAGCAGAACGAGGTCCGGTACTGAGGCTCTGTACCGTGAAC  
 AGCGTGGAGGAAAAGATCCTCGCGGCCGCAAAATACAAGCTGAACGTGGATCAGAAAAGTATCCAGGCGG  
 GCATGTTTGACCAAAAAGTCTTCAAGCCACGAGCGGAGGGCATTCTGCAGGCCATCTGGAGCATGAGGA  
 GGAAAAAGAGGAAGAAGTGAAGTACCGGACGATGAGACTCTGAACCAAATGATTGCTCGACGAGAAGAA  
 GAATTTGACCTTTTTATGCGGATGGACATGGACCGCGGAGGGAAGATGCCCGGAACCCGAAACGGAAGC  
 CCCGTTTAAATGGAGGAGGATGAGCTGCCCTCCTGGATCATTAAGGATGACGCTGAAGTAGAAAGGCTCAC  
 CTGTGAAGAAGAGGAGGAGAAAATATTTGGGAGGGGTCCCGCCAGCGCGTACAGTGGACTACAGTGC  
 GCCCTCACGGAGAAGCAGTGGCTAAGGGCCATCGAAGACGGCAATTTGGAGGAAATGGAAGAGGAAGTAC  
 GGCTTAAGAAGCGAAAAAGACGAAGAAATGTGGATAAAGATCCTGCAAAAAGAAAGTGTGGAAAAAGCTAA  
 GAAGAGAAGAGGCGCCCTCCCGCTGAGAACTGTCAACCAATCCCCCAAACTGACAAAAGCAGATGAAC  
 GCTATCATCGATACTGTGATAAACTACAAAGATAGTTCAGGGCGACAGCTCAGTGAAGTCTTCATTCAAGT  
 TACCTTCAAGGAAAGAATTACCAGAATACTATGAATTAATTAGGAAGCCAGTGGATTTCAAAAAATAAA  
 GGAAAGGATTCGTAATCATAAGTACCGGAGCCTAGCGACCTGGAGAAGGATGTCATGCTCTCTGTCCAC  
 AACGCTCAGACGTTCAACCTGGAGGGATCCAGATCTATGAAGACTCCATCGTCTTACAGTCAAGTGTTA  
 AGAGTCCCGGCAGAAAATTGCCAAAGAGGAAGAGAGTGAAGATGAAAGCAATGAAGAGGAGGAAGAGGA  
 AGATGAAGAAGAGTCAAGTCCGAGGCAAAATCAGTCAAGGTGAAAATTAAGCTCAATAAAAAAGATGAC  
 AAAGGCCGGGACAAAGGAAAGGCAAGAAAAGGCCAAATCGAGGAAAAGCCAAACCTGTAGTGAGCGATT  
 TTGACAGCGATGAGGAGCAGGATGAACGTGAACAGTCAAGGAAGTGGGACGGATGATGAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC240168 representing NM\_001289397  
 Red=Cloning site Green=Tags(s)

MSTPTDPGAMPHPGPSPGPGSPGPILGSPGPGSPGSPGSHMMGSPGPPSVSHPMPTMGSTDFPQEGM  
 HQMHKPIDGIHDKGIVEDIHCGSMKGTGMRPPHPGMGPPQSPMDQHSQGYMSPHPSPLAGAPEHVSSPMSG  
 GGPTPPQMPPSQPGALIPGDPQAMSQPNRGPSPFSPVQLHQLRAQILAYKMLARGQPLPETLQLAVQGKR  
 TLPGLQQQQQQQQQQQQQQQQQQQQQQPPQPPQPTQQQQQPALVNYNRPSPGPGPEL SGPSTPQKLPV  
 PAPGGRPSAPPAAAAQPPAAAVPGPSVPQAPAGQPSPVLQLQQKQSRISPIQKQPGLDPVEILQEREYRL  
 QARIAHRIQELENLPGSLPPDLRTKATVELKALRLLNFQRQLRQEVVACMRRDRTLETALNSKAYKRSKR  
 QTLREARMTEKLEKQKQIEQERKRRQKHQEYLNLSILQHAKDFKEYHRVAVAGKIQKLSKAVATWHANTERE  
 QKKETERIEKERMRLMAEDEEGYRKLIDQKKDRRLAYLLQQTDEYVANL TNLVWEHKQAQAAKEKKRRR  
 RRRKKAENAEGGESALGPDGEPIDESSQMSDLPVKVTHTETGKVLFGPEAPKASQLDAWLEMNPGYEVA  
 PRSDSESDSYEEDEEEESSRQETEEKILLDPNSEEVSEKDAKQI IETAKQDVDEYSMQYSARGSQS  
 YYTVAHAI SERVEKQSALLINGTLKHYQLQGLEWMVSLYNNNLNGILADEMGLGKTIQTIALITYLMEHK  
 RLNGPYLIIIVPLSTLSNWTYEFDKWAPSVVKISYKGPAMRRSLVPQLRSGKFNVLTTTYEYIIKDKHIL  
 AKIRWKYMI VDEGHRMKNHHCKLTQVDLNEEETILIIIRLHKVLRPFLRLRLLKKEVESQLPEKVEYVIK  
 DMSALQKILYRHMQAAGILLTDGSEKDKKGGGAKTLMNTIMQLRKICNHPYMFQHIEESFAEHLGYSNG  
 VINGAELYRASGFELLDRLPKLRATNHRVLLFCQMTSLMTIMEDYFAFRNFLYLRDGTTKSEDRAAL  
 LKKFNPEGSQYIFLLSTRAGGLGLNLQAADTVVIFDSWNPHQDLQAQDRAHRIGQQNEVRVLRCLTVN  
 SVEEKILAAAKYKLNVDQKVIQAGMFDQKSSSHERRAFLQAILEHEEENEDEVPDDETLNQMIARREE  
 EFDLFMRMDRRREDARNPKRKPRLMEDELPSWIIKDDAEVERLTCEEEEEKIFGRGRQRDDVDYSD  
 ALTEKQWLRAIEDGNLEEMEEVRLKRRKRRRNVDKPAKEDVEKAKRRGRPPAEKLSNPPKLTQOMN  
 AIIDTVINYKDSGRQLSEVFIQLPSRKELPEYYELIRKPVDFKKIKERIRNHKYSRSLGDLEKDVMLLCH  
 NAQTFNLEGSQIYEDSIVLQSVFKSARQKIAKEEESSESENEEEEESESEAKSVKVIKLNKKDD  
 KGRDKGKGRPNRGKAKPVVSDFSDSEEQDEREQSEGS GTDDE

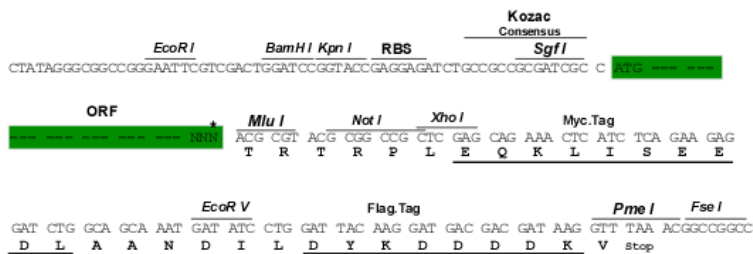
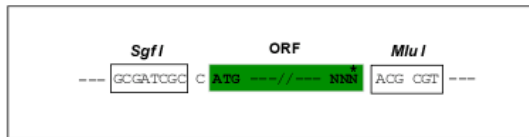
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

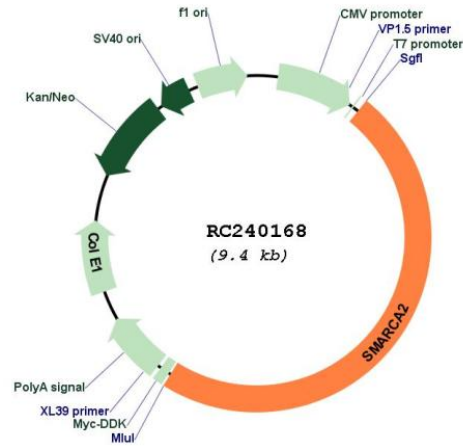
Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_001289397

**ORF Size:** 4542 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\\_001289397.2](#)

**RefSeq Size:** 5664 bp

**RefSeq ORF:** 4545 bp

**Locus ID:** 6595

**UniProt ID:** [P51531](#)

**Cytogenetics:** 9p24.3

**Protein Families:** Druggable Genome

**MW:** 173 kDa

**Gene Summary:** The protein encoded by this gene is a member of the SWI/SNF family of proteins and is highly similar to the brahma protein of Drosophila. Members of this family have helicase and ATPase activities and are thought to regulate transcription of certain genes by altering the chromatin structure around those genes. The encoded protein is part of the large ATP-dependent chromatin remodeling complex SNF/SWI, which is required for transcriptional activation of genes normally repressed by chromatin. Alternatively spliced transcript variants encoding different isoforms have been found for this gene, which contains a trinucleotide repeat (CAG) length polymorphism. [provided by RefSeq, Jan 2014]