

Product datasheet for **RC226413**

BRG1 (SMARCA4) (NM_001128845) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BRG1 (SMARCA4) (NM_001128845) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SMARCA4
Synonyms:	BAF190; BAF190A; BRG1; CSS4; hSNF2b; MRD16; RTPS2; SNF2; SNF2-beta; SNF2L4; SNF2LB; SWI2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC226413 representing NM_001128845 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCCACTCCAGACCCACCCCTGGGCGGAACCTCGGCCAGGTCTTCCCCGGGCCCTGGCCCTTCCC
CTGGAGCCATGCTGGGCCCTAGCCCGGGTCCCTCGCCGGGCTCCGCCACAGCATGATGGGGCCAGCCC
AGGGCCGCCCTCAGCAGGACACCCCATCCCCACCCAGGGGCTGGAGGGTACCCTCAGGACAACATGCAC
CAGATGCACAAGCCCATGGAGTCCATGCATGAGAAGGGCATGTCGGACGACCCCGCTACAACCAGATGA
AAGGAATGGGGATGCGGTGAGGGGCCATGCTGGGATGGGGCCCCCGCCAGCCCATGGACCAGCACTC
CCAAGTTACCCCTCGCCCTGGGTGGCTCTGAGCATGCCTCTAGTCCAGTTCAGCCAGTGGCCCGTCT
TCGGGGCCCCAGATGTCTTCCGGGCCAGGAGGTGCCCCGCTGGATGGTGTGACCCCAAGCCTTGGGGC
AGCAGAACCGGGGCCAACCCCATTTAACCAGAACCAGCTGCACCAGCTCAGAGCTCAGATCATGGCCTA
CAAGATGCTGGCCAGGGGCGAGCCCTCCCCGACCACCTGCAGATGGCGGTGCAGGGCAAGCGGCCGATG
CCCGGGATGCAGCAGCAGATGCCAACGCTACCTCCACCCTCGGTGTCGCAACAGGACCCGGCCCTGGCC
CTGGCCCTGGCCCCGGCCCGGTCCCGGCCCGCACCTCCAAATTACAGCAGGCCTCATGGTATGGGAGG
GCCCAACATGCCTCCCCAGGACCCTCGGGCGTGCCCCCGGGATGCCAGGCCAGCCTCCTGGAGGGCCT
CCCAAGCCCTGGCCTGAAGGACCATGGCGAATGCTGCTGCCCCACGAGCACCCCTCAGAAGCTGATTC
CCCCGACGCCAACGGCCGCCCTTCCCCCGGCCCCCTGCGTCCACCCGCCGCTCGCCGATGATGCC
ACCGCAGACCCAGTCCCCCGGGCAGCCGCCAGCCCGCCCATGGTGCCTACTGCACCAGAAGCAGAGC
CGCATCACCCCATCCAGAAGCCGCGGGGCTCGACCCTGTGGAGATCCTGCAGGAGCGGAGTACAGGC
TGCAGGCTCGCATCGCACACCGAATTCAGGAACCTGAAAACCTTCCCGGGTCCCTGGCCGGGATTTGCG
AACCAAAGCGACCATTGAGCTCAAGGCCCTCAGGCTGCTGAACTTCCAGAGGCAGCTGCGCCAGGAGGTG
GTGGTGTGCATGCGGAGGGACACAGCGCTGGAGACAGCCCTCAATGCTAAGGCCTACAAGCGCAGCAAGC
GCCAGTCCCTGCGGAGGCCCGCATCACTGAGAAGCTGGAGAAGCAGCAGAAGATCGAGCAGGAGCGCAA
GCGCCGCGAGAAGCACCAGGAATACCTCAATAGCATTCTCCAGCATGCCAAGGATTTCAAGGAATATCAC



[View online »](#)

AGATCCGTCACAGGCAAAATCCAGAAGCTGACCAAGGCAGTGGCCACGTACCATGCCAACACGGAGCGGG
AGCAGAAGAAAGAGAACGAGCGGATCGAGAAGGAGCGCATGCGGAGGCTCATGGCTGAAGATGAGGAGGG
GTACCGCAAGCTCATCGACCAGAAGAAGGACAAGCGCCTGGCCTACCTCTTGACGAGACAGACGAGTAC
GTGGCTAACCTCACGGAGCTGGTGCAGCAGCACAAGGCTGCCAGGTGCGCAAGGAGAAAAAAGAAAA
AGAAAAAGAAAGGCAGAAAAATGCAGAAGGACAGACGCCTGCCATTGGCCGGATGGCGAGCCTCTGGA
CGAGACCAGCCAGATGAGCGACCTCCCGGTGAAGGTGATCCACGTGGAGAGTGGGAAGATCCTCACAGGC
ACAGATGCCCCAAAGCCGGGCAGCTGGAGCCCTGGCTCGAGATGAACCCGGGGTATGAAGTAGCTCCGA
GGTCTGATAGTGAAGAAAGTGGCTCAGAAGAAGGAAGAGGAGGAGGAGGAAGAGCAGCCGACGGCAGC
ACAGCCTCCACCTGCCGTGGAGGAGAAGAAGATTCCAGATCCAGACAGCGATGACGTCTCTGAG
GTGGACGCGCGGCACATCATTGAGAATGCCAAGCAAGATGTCGATGATGAATATGGCGTGTCCAGGCC
TTGCACGTGGCCTGCAGTCTACTATGCCGTGGCCATGCTGTCAGTGCAGAGAGTGGACAAGCAGTCAAG
GCTTATGGTCAATGGTGTCTCAAACAGTACCAGATCAAAGGTTTGGAGTGGCTGGTGTCCCTGTACAAC
AACACCTGAACGGCATCCTGGCCGACGAGATGGCCTGGGAAGACCATCCAGACCATCGCGCTCATCA
CGTACCTCATGGAGCACAACGCATCAATGGGCCCTTCTCATCATCGTGCCTCTCTCAACGCTGTCCAA
CTGGGCGTACGAGTTTGACAAGTGGGCCCTCCGTGGTGAAGGTGCTTACAAGGGATCCCGAGCAGCA
AGACGGGCTTTGTCCCCAGCTCCGGAGTGGGAAGTTCAACGTCTTGCTGACGAGTACGAGTACATCA
TCAAAGACAAGCACATCCTCGCCAAGATCCGTTGGAAGTACATGATTGTGGACGAAGGTCACCGCATGAA
GAACCACCACTGCAAGCTGACGCAGGTGCTCAACACGCACTATGTGGACCCCGCCGCTGCTGCTGACG
GGCACACCGCTGCAGAACAAGCTTCCGAGCTCTGGGCGTGTCAACTTCTGCTGCCACCATTTCA
AGAGCTGCAGCACCTTCGAGCAGTGGTTAACGCACCTTTGCCATGACCGGGAAAAAGGTGGACCTGAA
TGAGGAGGAAACCATTCTCATATCCGGCGTCTCCACAAAGTGTGCGGCCCTTCTGCTCCGACGACTC
AGAAGGAAGTCGAGGCCAGTTGCCGAAAAGGTGGAGTACGTATCAAGTGCAGATGTCTGGCTGC
AGCGAGTGTCTACCGCCACATGCAGGCCAAGGCGTGTGCTGACTGATGGCTCCGAGAAGGACAAGAA
GGGCAAAGGCGGCACCAAGACCTGATGAACACCATCATGCAGCTGCGGAAGATCTGCAACCACCCCTAC
ATGTTCCAGCACATCGAGGAGTCTTTTCCGAGCACTTGGGGTCACTGGCGCATTGTCCAAGGCTGG
ACCTGTACCGAGCCTCGGGTAAATTTGAGCTTCTTGATAGAATTCTTCCAAAACCTCCGAGCAACCAACA
CAAAGTGTGCTGTTCTGCCAAATGACCTCCCTCATGACCATCATGGAAGATTACTTTGCGTATCGCGGC
TTTAAATACCTCAGGCTTGATGGAACCAGGAAGGCGGAGGACCGGGCATGCTGCTGAAAACCTTCAACG
AGCCCGGCTCTGAGTACTTCTGCTCAGCACCCGGCTGGGGGCTCGGCTGACCTCCAGTC
GGCAGACACTGTGATCATTTTTCAGCGACTGGAATCCTCACCAGGACCTGCAAGCGCAGGACCGAGCC
CACCGCATCGGGCAGCAGAACGAGGTGCGTGTGCTCCGCTCTGCACCGTCAACAGCGTGGAGGAGAAGA
TCCTAGCTGCAGCCAAGTACAAGCTCAACGTGGACCAGAAGGTGATCCAGGCCGGCATGTTGACAGAA
GTCCTCCAGCCATGAGCGGCGCGCTTCTGACAGCCATCCTGGAGCACGAGGAGCAGGATGAGGAGGAA
GACGAGGTGCCGACGACGAGACCGTCAACCAGATGATCGCCCGCACGAGGAGGAGTTTGTATCTGTTCA
TGCGCATGGACCTGGACCGCAGGCGGAGGAGGCCGCAACCCCAAGCGGAAGCCGCGCCTCATGGAGGA
GGACGAGCTCCCTCGTGGATCATCAAGGACGACGCGGAGGTGGAGCGGTGACCTGTGAGGAGGAGGAG
GAGAAGATGTTCCGGCCGTGGCTCCCGCCACCGCAAGGAGGTGACTACAGCGACTCACTGACGGAGAAGC
AGTGGCTCAAGACCTGAAGGCCATCGAGGAGGACGCTGGAGGAGATCGAAGAGGAGGTCCGGCAGAA
GAAATCATCACGGAAGCGCAAGCGAGACAGCAGCGCCGGCTCTCCACCCCGACCAAGCAGCAGCCGAGC
CGCGACAAGGACGACGAGAGCAAGAAGCAGAAGAAGCGCGGGCGGCCCTGCGGAGAAAATCTCCCTTA
ACCCACCAACCTCACCAGAAGATGAAGAAGATTGTGGATGCCGTGATCAAGTACAAGGACAGCAGCAG
TGGACGTGAGCTCAGCGAGGTCTTATCCAGCTGCCCTCGGAAAAGGAGTGCAGGAGTACTACGAGCTC
ATCCGCAAGCCCGTGGACTTCAAGAAGATAAAGGAGCGCATTGCAACCAAGTACCGCAGCCTCAACG
ACCTAGAGAAGGACGTGATGCTCCTGTGCCAGAACGCACAGACCTTCAACCTGGAGGGCTCCCTGATCTA
TGAAGACTCCATCGTCTGAGTCGGTCTTACCAGCGTGCAGCAGAAAAATCGAGAAGGAGGATGACAGT
GAAGGCGAGGAGTGGAGGAGGAAGAGGGCGAGGAGGAAGGCTCCGAATCCGAATCTCGGTCCGTCA
AAGTGAAGATCAAGCTTGGCCGGAAGGAGAAGGCACAGGACCGGCTGAAGGGCGGCGGCGGCGGAG
CCGAGGGTCCCGAGCAAGCCGGTCTGAGTACGATGACAGTACAGGAGGAACAAGAGGAGGACCGCTCA
GGAAGTGGCAGCGAAGAAGAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC226413 representing NM_001128845
 Red=Cloning site Green=Tags(s)

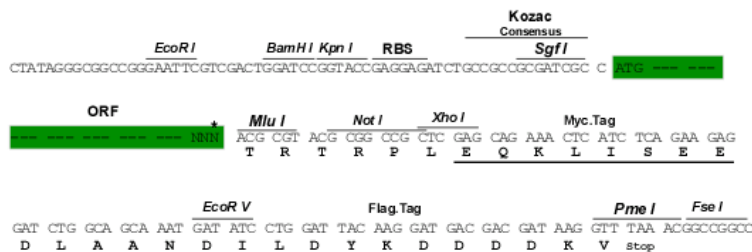
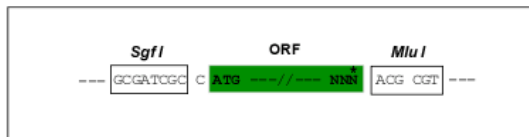
MSTDPPLGGTPRPGSPGPGSPGAMLGPSGPGSPGSAHSMGPPSPGPPSAGHP IPTQGGPGYPQDNMH
 QMHKPMESMHEKGMDDPRYNQMKGMGMRSGGHAGMGPPSPMDQHSQGYPSPLGGSEHASSPVPASGPS
 SGPQMSSGGAPLDGADPQALGQONRGPTFPNQNLHQLRAQIMAYKMLARGQPLPDHLQMAVQKGRPM
 PGMQQQMPTLPPPSVSATGPGPGPGPGPGPGPAPPNYSRPHGMGGPNMPPPGSGVPPGMPGQPPGGP
 PKPWEGPMANAAAPTSTPQKLIPPQTPGRPSPAPPVPPAASPVMPPQTQSPGQPAQPAPMVPLHQKQS
 RITPIQKPRGLDPEILQEREYRLQARI AHRIQELENLPGSLAGDLRTKATIELKALRLLNFQRQLRQEV
 VVCMRRDTALETALNAKAYKRSKRQSLREARITEKLEKQKQIEQERKRRQKHQEYLNLSILQHA KDFKEYH
 RSVTGKIQLTKAVATYHANTEREQKKENERIEKERMRLMADEEGYRKLIDQKKDKRLAYLLQQTDEY
 VANLTELVRQHKAAQVAKEKKKKKKKAENAEGQTPAIGPDGEPLDETSQMSDLPVKVIHVESGKILTG
 TDAPKAGLEAWLEMNPGYEVAPRSDSEESGSEEEEEEEEEEQPAAQPPTLPVEEKKKIPDPDSDVSE
 VDARHIENAKQVDDEYGVSQLARGLQSYAVAHAVTERVDKQSALMVNGVLKQYQIKGLEWLVSLYN
 NNLNGILADEMGLKTIQTIALITYLMEHKRINGPFLIIVPLSTLSNWAYEFDKWAPSVVKVSYKGPAA
 RRAFPVQLRSGKFNVLTTYEYI IKDKHILAKIRWKYMI VDEGHRMKNHHCKLTQVLNTHYVAPRLLLT
 GTPLQNKLP ELWALLNFLLP TIFKSCSTFEQWFPNAPFAMTGEKVDLNEEETILIRRLHKVLRPFLRLR
 KKEVEAQLPEKVEYVIKCDMSALQRVLYRHMQAKGVLLTDGSEKDKKGGTKTLMNTIMQLRKICNHPY
 MFQHIEESFSEHLGFTGGIVQGLDLYRASGKFELLDRIPLKLRATNHNKVLFFCQMTSLMTIMEDYFAYRG
 FKYLRLDGTTKAEDRGMLLKTFFNEPGSEYFIFLLSTRAGGLNLQSADTVIIFDSDWNP HQDLQAQDRA
 HRIGQQNEVRVRLRLCTVNSVEEKILAAAKYKLNVDQKVIQAGMFDQKSSSHERRAFLQAILEHEEQDEE
 DEVPDDET V NQMIARHEEEFDL FMRMDLDRRREEARNPKRKPRLMEDELPSWIKDDAEVERLTCEEEE
 EKMFGRGSRHRKEVDYSDSLTEKQWLKTLKAIIEEGTLEEIEEEVQRKSSRKRKRSDAGSPTTSTRS
 RDKDDESKKQKGRPPAEKLSNPNNLTKMKKIVDAVIKYKDSSSGRQLSEVF IQLPSRKELPEYYEL
 IRKPVDFKKIKERIRNHKYRSLNLEKDVMLLCQNAQTFNLEGLSIYEDSIVLQSVFTSVRQKIEKEDDS
 EGEESEEEEEEGSESESRSVKVIKIGRKEKAQDRLKGGRRRPSRGSRAKPVVSDDDSEEEQEEDRS
 GSGSEED

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

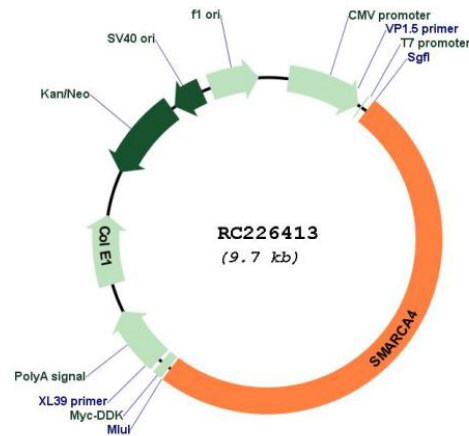
Restriction Sites:
Cloning Scheme:

SgfI-MluI

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:


ACCN: NM_001128845

ORF Size: 4851 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_001128845.2](#)

RefSeq ORF: 4854 bp

Locus ID: 6597

UniProt ID: [P51532](#)

Cytogenetics: 19p13.2

Protein Families: Druggable Genome, Transcription Factors

MW: 181.5 kDa

Gene Summary: The protein encoded by this gene is a member of the SWI/SNF family of proteins and is 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. In addition, this protein can bind BRCA1, as well as regulate the expression of the tumorigenic protein CD44. Mutations in this gene cause rhabdoid tumor predisposition syndrome type 2. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2012]