

Product datasheet for **RG226411**

BRG1 (SMARCA4) (NM_001128847) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BRG1 (SMARCA4) (NM_001128847) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SMARCA4
Synonyms:	BAF190; BAF190A; BRG1; CSS4; hSNF2b; MRD16; RTPS2; SNF2; SNF2-beta; SNF2L4; SNF2LB; SWI2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG226411 representing NM_001128847 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGTCCACTCCAGACCCACCCCTGGGCGGAACTCCTCGGCCAGGTCTTCCCCGGGCCCTGGCCCTTCCC
CTGGAGCCATGCTGGGCCTAGCCCGGGTCCCTCGCCGGGCTCCGCCACAGCATGATGGGGCCAGCCC
AGGGCCGCCCTCAGCAGGACACCCCATCCCCACCCAGGGGCTGGAGGTACCCTCAGGACAACATGCAC
CAGATGCACAAGCCCATGGAGTCCATGCATGAGAAGGGCATGTCGGACGACCCCGCTACAACCAGATGA
AAGGAATGGGGATGCGGTGAGGGGCCATGCTGGGATGGGGCCCCCGCCAGCCCATGGACCAGCACTC
CCAAGTTACCCCTCGCCCTGGGTGGCTCTGAGCATGCCTCTAGTCCAGTTCAGCCAGTGCCCGTCT
TCGGGGCCCCAGATGTCTTCCGGGCCAGGAGGTGCCCGCTGGATGGTGTGACCCCGAGCCTTGGGGC
AGCAGAACCAGGGCCCAACCCCATTTAACCAGAACCAGCTGCACCAGCTCAGAGCTCAGATCATGGCCTA
CAAGATGTCTGGCCAGGGGCGAGCCCTCCCCGACCACCTGCAGATGGCGGTGCAGGGCAAGCGGCCGATG
CCCGGGATGCAGCAGCAGATGCCAACGCTACCTCCACCCTCGGTGTCGCAACAGGACCCGGCCCTGGCC
CTGGCCCTGGCCCCGGCCCGGGTCCCGGCCCGGCACCTCCAAATTACAGCAGGCCATGATGGTATGGGAGG
GCCCAACATGCCTCCCCAGGACCTCGGGCGTCCCCCGGGATGCCAGGCCAGCCTCTGGAGGGCCT
CCCAAGCCCTGGCCTGAAGGACCCATGGCGAATGCTGTGCCCCACGAGCACCCCTCAGAAGCTGATTC
CCCCGACGCCAACGGGCCGCCCTTCCCCCGGCCCGCTGCCGTCCACCCCGCCCTCGCCCGTGTGCC
ACCGCAGACCCAGTCCCCGGGACGCCGGCCAGCCCGGCCCATGGTGCCACTGCACCAGAAGCAGAGC
CGCATCACCCCATCCAGAAGCCGCGGGCCCTCGACCCTGTGGAGATCCTGCAGGAGCGGAGTACAGGC
TGCAAGGCTCGCATCGCACACCGAATTGAGAACTTGAACCTTCCCGGGTCCCTGGCCGGGATTTGCG
AACCAAGCGACCATGAGCTCAAGGCCCTCAGGCTGCTGAACCTCCAGAGGCAGCTGCGCCAGGAGGTG
GTGGTGTGCATGCGGAGGGACACAGCGCTGGAGACAGCCCTCAATGCTAAGGCCTACAAGCGCAGCAAGC
GCCAGTCCCTGCGGAGGCCCGCATCACTGAGAAGCTGGAGAAGCAGCAGAAGATCGAGCAGGAGCGCAA



[View online >](#)

GCGCCGGCAGAAGCACCAGGAATACCTCAATAGCATTCTCCAGCATGCCAAGGATTTCAAGGAATATCAC
 AGATCCGTACAGGCAAAATCCAGAAGCTGACCAAGGCAGTGGCCACGTACCATGCCAACACGGAGCGGG
 AGCAGAAGAAAGAGAACGAGCGGATCGAGAAGGAGCGCATGCGGAGGCTCATGGCTGAAGATGAGGAGGG
 GTACCGCAAGCTCATCGACCAGAAGAAGGACAAGCGCCTGGCCTACCTCTTGACAGACAGACGAGTAC
 GTGGCTAACCTCACGGAGCTGGTGGCCAGCACAAGGCTGCCAGGTGCCAAGGAGAAAAAGAAAA
 AGAAAAAGAAGAAGGCAGAAAAATGCAGAAGGACAGACGCCTGCCATTGGGCCGGATGGCGAGCCTCTGGA
 CGAGACCAGCCAGATGAGCGACCTCCCGGTGAAGGTGATCCACGTGGAGAGTGGGAAGATCCTCACAGGC
 ACAGATGCCCCCAAAGCCGGGCAGCTGGAGGCCTGGCTCGAGATGAACCCGGGGTATGAAGTAGCTCCGA
 GGTCTGATAGTGAAGAAAGTGGCTCAGAAGAAGAGGAAGAGGAGGAGGAAGAGCAGCCGAGGCAGC
 ACAGCCTCCCACCCTGCCGTGGAGGAGAAGAAGAAGATTCCAGATCCAGACAGCGATGACGTCTCTGAG
 GTGGACGCGCGGCACATCATTGAGAATGCCAAGCAAGTGTGATGATGAATATGGCGTGTCCAGGCC
 TTGCACGTGGCCTGCAGTCTACTATGCCGTGGCCATGCTGTCAGTGGAGAGTGGACAAGCAGTCAAGC
 GCTTATGGTCAATGGTGTCTCAAACAGTACCAGATCAAAGGTTTGGAGTGGCTGGTGTCCCTGTACAAC
 AACACCTGAACGGCATCCTGGCCGACGAGATGGGCTGGGAAGACCATCCAGACCATCGCGCTCATCA
 CGTACCTCATGGAGCACAACGCATCAATGGGCCCTTCTCATCATCGTGCCTCTCTCAAGCTGTCCAA
 CTGGGCGTACGAGTTTGACAAGTGGGCCCTCCGTGGTGAAGGTGCTTACAAGGGATCCCCAGCAGCA
 AGACGGGCCTTTGTCCCCAGCTCCGGAGTGGGAAGTTCAACGTCTTGCTGACGACGTACGAGTACATCA
 TCAAAGACAAGCACATCCTCGCCAAGATCCGTTGGAAGTACATGATTGTGGACGAAGTCAACGCATGAA
 GAACCACCACTGCAAGCTGACGCAGGTGCTCAACACGCACTATGTGGACCCCGCCGCTGCTGTGACG
 GGCACACCGCTGCAGAACAAGCTTCCGAGCTCTGGGCGTGTCAACTTCTGTGCCACCATCTTCA
 AGAGCTGCAGCACCTTCGAGCAGTGGTTAACGCACCCCTTCCATGACCCGGGAAAAGGTGGACCTGAA
 TGAGGAGGAAACCATTCTCATCATCCGGCGTCTCCAAAAGTGTGGAGTACGTCAAGTGGCAGATGCTGGC
 AGCGAGTGTCTACCGCCACATGCAAGCCAAAGGCGTGTGCTGACTGATGGCTCCGAGAAGGACAAGAA
 GGGCAAAGGCGGCACCAAGACCCTGATGAACACCATCATGCAAGTGGGAAGATCTGCAACCACCCCTAC
 ATGTTCCAGCACATCGAGGAGTCTTTTCCGAGCACTTGGGGTCACTGGCGCATTGTCCAAGGGCTGG
 ACCTGTACCGAGCCTCGGGTAAATTTGAGCTTCTTGATAGAATCTTCCCAAACCTCCGAGCAACCAACCA
 CAAAGTGTGCTGTTCTGCCAATGACCTCCCTCATGACCATCATGGAAGATTACTTTGCGTATCGCGGC
 TTTAAATACCTCAGGCTTGATGGAACCACGAAGGCGGAGGACCGGGCATGCTGTGAAAACCTTCAACG
 AGCCCGGCTCTGAGTACTTCTCTCTGCTCAGCACCCGGGCTGGGGGCTCGGCTGAACCTCCAGTC
 GGCAGACACTGTGATCATTTTTGACAGCGACTGGAATCCTCACCAGGACCTGCAAGCGCAGGACCGAGCC
 CACCGCATCGGGCAGCAGAACGAGGTGCGTGTGCTCCGCCTCTGCACCGTCAACAGCGTGGAGGAGAAGA
 TCTAGCTGCAGCCAAGTACAAGCTCAACGTGGACCAGAAGGTGATCCAGGCCGGCATGTTCCAGCAGAA
 GTCCTCCAGCCATGAGCGGCGCGCTTCTGACAGGCCATCCTGGAGCACGAGGAGCAGGATGAGGAGGAA
 GACGAGGTGCCGACGACGAGACCGTCAACCAGATGATCGCCCGCAGGAGGAGGATTTGATCTGTTCA
 TGCGCATGGACCTGGACCGCAGGCGGAGGAGGCCGCAACCCCAAGCGGAAGCCGCGCTCATGGAGGA
 GGACGAGCTCCCCTCGTGGATCATCAAGGACGACGCGGAGGTGGAGCGGTGACCTGTGAGGAGGAGGAG
 GAGAAGATGTTCCGGCCGTGGCTCCCGCCACCGCAAGGAGGTGGACTACAGCGACTCACTGACGGAGAAGC
 AGTGGCTCAAGCCATCGAGGAGGGCACGCTGGAGGAGATCGAAGAGGAGGTCCGGCAGAAGAAATCATC
 ACGGAAGCGCAAGCGAGACAGCAGCGCCGGCTCCTCCACCCGACCACAGCACCCGACGCCGCGACAAG
 GACGACGAGAGCAAGAAGCAGAAGAAGCGCGGGCGCCGCTGCCGAGAACTCTCCCCTAACCCACCCA
 ACCTCACCAAGAAGATGAAGAAGATTGTGGATGCCGTGATCAAGTACAAGGACAGCAGCAGTGGACGTCA
 GCTCAGCGAGGTCTTATCCAGCTGCCCTCGCAAAGGAGCTGCCGAGTACTACGAGCTCATCCGCAAG
 CCCGTGGACTTCAAGAAGATAAAGGAGCGCATTGCAACCACAAGTACCGCAGCCTCAACGACCTAGAGA
 AGGACGTATGCTCCTGTGCCAGAACGCACAGACCTTCAACCTGGAGGGCTCCCTGATCTATGAAGACTC
 CATCGTCTTGAGTGGTCTTACCAGCGTGGCGCAGAAAATCGAGAAGGAGGATGACAGTGAAGGCGAG
 GAGAGTGAAGGAGGAGGAAGAGGGCGAGGAGGAAGGCTCCGAATCCGAATCTCGGTCCGTCAAAGTGAAGA
 TCAAGCTTGGCCGAAGGAGAAGGCACAGGACCGGCTGAAGGGCGCCGCGCGCGCCGAGCCGAGGGTC
 CCGAGCCAAGCCGTCGTGAGTACGATGACAGTGAAGGAGGAACAGAGGAGGACCGCTCAGGAAGTGGC
 AGCGAAGAAGAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

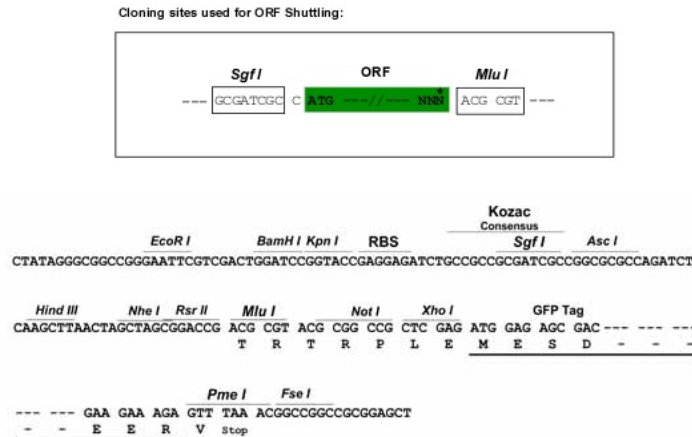
Protein Sequence: >RG226411 representing NM_001128847
 Red=Cloning site Green=Tags(s)

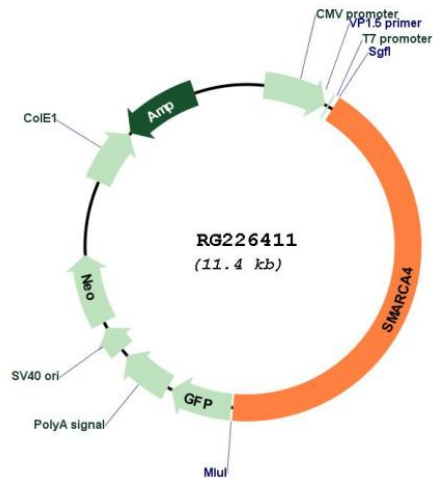
```
MSTPDPPLGGTPRPGSPGPGSPGAMLGPSGPGSPGSAHSMGPPSPGPPSAGHPIPTQGGPGYPQDNMH
QMHKPMESMHEKGMDDPRYNQMKGMGMRSGGHAGMGPPPSPMDQHSQGYPSPLGGSEHASSVPVPSGSP
SGPQMSSSGPGGAPLDGADPQALGQQNRGPTPFNQNLHQLRAQIMAYKMLARGQPLPDHLQMAVQKGRPM
PGMQQQMPTLPPPSVSATGPGPGPGPGPGPGPAPPNYSRPHGMGGPNMPPPGSPGVPPGMPGQPPGGP
PKPWPEGPMANAAAPTSTPQKLIPPQTPGRPSPAPPVPPAASPVMPPTQSPGQPAQPAPMVPLHQKQS
RITPIQKPRGLDPEILQEREYRLQARIAHRIQELENLPGSLAGDLRKTATIELKALRLNLFQRQLRQEV
VVMRRTALEALNAKAYKRSKRQSLREARITEKLEKQKQIEQERKRRQKHQEYLNLSILQHAQKDFKEYH
RSVTGKIQLTKAVATYHANTEREQKKENERIEKERMRLMADEEgyrklIDQKDKRLAYLLQQTDEY
VANLTELVRQHKAAQVAKEKKKKKKKKAENAEGQTPAIGPDGEPLDETSQMSDLPVKVIHVESGKILTG
TDAPKAGQLEAWLEMNPGYEVAPRSDSEESGSEEEEEEEEEEQPAAQPPTLPVEEKKKIPDPDSDVSE
VDARHIENAKQVDDEYGVSQLARGLQSYAVAHAVTERVDKQSALMVNGVLKQYQIKGLEWL VSLYN
NNLNGILADEMGLKTIQTIALITYLMEHKRINGPFLIIVPLSTLSNWAYEFDKWAPSVVKVSYKGPAA
RRAFVPLRSGKFNVLTTYEYI IKDKHILAKIRWKYMI VDEGHRMKNHHCKLTQVLNTHYVAPRLLLLT
GTPLQNKLPPELLWALLNFLLP TIFKSCSTFEQWFNAPFAMTGEKVDLNEEETILIRRLHKVLRPFLRLR
KKEVEAQLPEKVEYVIKCDMSALQRVLYRHMQAKGVLLTDGSEKDKKGGTKTLMNTIMQLRKICNHPY
MFQHIEESFSEHLGFTGGIVQGLDLYRASGKFELLDRIPLKLRATNHNKVLFFCQMTSLMTIMEDYFAYRG
FKYLRLDGTTKAEDRGMLLKTTFNEPGSEYFIFLLSTRAGGLGNLQSADTVIIFDSWNPHQDLQAQDRA
HRIGQQNEVRVRLRLCTVNSVEEKILAAKYKLNVDQKVIQAGMFDQKSSSHERRAFLQAILEHEEQDEEE
DEVPPDET VNQMIARHEEEFDL FMRMDLDRRREEARNPKRKPRLMEDELPSWIKDDAEVERLTCEEEE
EKMFGRGSRHRKEVDYSDSLTEKQWLKAIIEEGTLEEIEEEVROKKSRRKRRKSDSDAGSSTPTTSTRSDK
DDESKKQKGRPPAEKLSNPNNLTKMKKIIVDAVIKYKDSSSGRQLSEVFIQLPSRKELPEYYELIRK
PVDFKKIKERIRNHKYSRLNDLEKDVMLLCQNAQTFNLEGLSIYEDSIVLQSVFTSVRQKIEKEDDSEGE
ESEEEEEEGESESRSVKVKIKLGRKEKAQDRLKGGRRRPSRGSRAKPVVSDDDSEEEQEEDRSGSG
SEED
```

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_001128847

ORF Size: 4842 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_001128847.4](#)

RefSeq Size: 5320 bp

RefSeq ORF: 4845 bp

Locus ID: 6597

UniProt ID: [P51532](#)

Cytogenetics: 19p13.2

Protein Families: Druggable Genome, Transcription Factors

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]