

Product datasheet for **RG226275**

SMARCAL1 (NM_001127207) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMARCAL1 (NM_001127207) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SMARCAL1
Synonyms:	HARP; HHARP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG226275 representing NM_001127207
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCCTTGCCTCTTACAGAGGAGCAGAGGAAAAAGATTGAAGAGAATCGACAAAAGGCTCTGGCCCGCA
 GAGCTGAGAAGTTATTGGCAGAACAGCATCAGAGGACTAGCTCGGGCACCTCCATTGCTGGCAACCCATT
 CCAGGCCAAGCAAGGCCCATCCCAAAATTTCCCAAGGGAGTCTTGTAAAGCCAGTGAGCCATGGTGTCTATT
 TTCAAGCAACAGAATCTCAGTAGCTCATCTAATGCTGACCAAAGACCTCATGATCCACAGTTCCTCAGG
 CAAAGGGAATATGGAAAAAGCCAGAAGAAATGCCACAGCCTGCCAGGCCACAGTCCACGTAGTCAAAT
 GGCTCTCACTGGAATCTCTCCTCCCTTGGCACAAAGTCTCCAGAGGTCCTAAACAACAGCTCTTGAGT
 TATGAGTTAGGTCAAGGTATGCTCAGGCTTACCTGAGATCAGGTTACACCCTTTGCTAACCCAACCTC
 ATAAGCCTCTGGCAAACCAAAGAGTTCCCAAGAGACACCAGCTATTCTCTGGACAGCCTCCAGGGA
 TGCTAAGTTAGAGGCCAAGACAGCAAAGCCTCCCTTCCGGGCAGAACATTTCTTACATCCATTCTAGC
 TCAGAGAGTGTAAAGCCAGGACAGAAGGAAGACTCCAGCAGAAGTCAGGGTCTCAGTCCAAAAAGGAG
 TGAACCTCTCAGAAGGAAAGTGCCTAAGGAACGGCGATCGTTCCAGGTGTTGATTGGGTACAATGCGGA
 ACTCATTGCAAGTGTAAAGACCTGCCAGCAAGAATTATGATCCTGACACCAAGACGTGGAACCTCAGC
 ATGAATGACTATAGTGCCTGATGAAAGCAGCCAGAGCCTCCACACGGTCAACCTGCAGCCTCTGGAAT
 GGGCCTATGGCAGCAGCGAGTCAACCTCCACCAGCAGTGAGGGACAGGCCGCGCTCCATCAGCTCCATC
 CCTTTCATTTGTCAAAGGGCGATGCATGCTCATCTCCAGGGCCTACTTCGAGGCAGACATCAGTTATTCA
 CAGGACCTATTGCGCTTTTTAAACAGATGGATTCCAGAAGATATGATGTCAAGACCAGGAAGTGGAGCT
 TTCTCTTGAAGAGCACAGTAACTAATTGCAAAGGTGCGCTGCCTCCACAAGTTCAGCCCTCT
 GCCACGACTCTACCCTGGCGTTTGCTTCTCAGCTCAAGAAGACATCTCTCAGTCTCACGCCAGATGTC
 CCAGAGGCAGACCTTTCTGAAGTGGACCCCAAGCTCGTGTCTAATCTGATGCCCTTTAGAGAGCTGGAG
 TCAATTTTGCATAGCCAAAGGAGGCCGCTGCTGCTCGCTGACGACATGGGCTGGGGAAGACCATCCA
 AGCCATCTGCATCGCAGCCTTTTACCGAAGGAGTGGCCGCTCCTGGTGGTGGTCCATCTCCGTGCGC
 TTCACCTGGGAGCAGGCCTTCTTCGGTGGTGCATCTCTGAGCCAGATTGCATCAACGTCGTGGTGA
 CTGGGAAGGACCCCTGACAGCTGGCCTGATCAACATTGTCAGCTTTGACCTTCTAGCAAGTTGGAAAA
 ACAGCTAAAAACCCCTTTTAAAGTTGTCATCATTGATGAATCTCACTTCCCTAAAAACAGTAGGACTGCC
 CGCTGTCGAGCAGCTATGCCGCTCTAAAGGTTGCCAAGAGGGTATCCTGTTGTCGGGCACACCAGCCA
 TGTCGCCGCCCGCAGAGCTCTACACGCAGATCATCGCAGTCAAGCCAACCTTTCTTCCCCAGTTTATGC
 CTTTGGACTTCGCTACTGTGATGCCAAACGGATGCCTTGGGGTGGGACTACTCAGGTTCTCCAACCTG
 GGAGAGCTGAAGCTCCTGCTGGAGGAAGCAGTCATGCTGCGGCGCCTCAAGTCCGACGCTCTTTCCAGC
 TGCTTCCCAAGCAGCGCAAGATAGTGGTATTGCCCCAGGACGGATCAATGCCAGGACCAGAGCTGCCCT
 GGATGCTGCAGCCAAGGAAATGACCACCAAGGACAAAACCTAAACAGCAGCAGAAAGATGCCCTCATTCTC
 TTCTTCAACAGAACAGCTGAAGCTAAAAATCCCATCTGTCATTGAATATATCTTGGACCTACTGAAAAGT
 GAAGAGAGAAGTTTTAGTATTTGCACACCATAAGGTGGTCTGGACGCAATTACGCAAGAGCTTGAGAG
 AAAGCAGTGCAGCACATCCGCATCGATGGCTCCACCTCATCAGCTGAGCGGGAGGACCTGTGCCAGCAG
 TTCCAAGTGTGAGAGAGGCATGCTGTGGCGTGTGTCATACCAGTGCCTCAATATGGGCTCACCTTCT
 CCTCGGCTGACCTGGTGGTGTGTTGCTGAGCTGTTTGGAAACCCAGGGTGTGATCCAGGCTGAGGACCG
 CGTGCACCGCATTGGACAGACCAGCTCCGTGGGCATTCACTACCTCGTGGCAAAGGGCACAGCTGATGAC
 TACCTTTGGCCCTGATTCAAGAGAAGATTAAGTTCTGGCAGAAGCCGGGCTTTCTGAGACCAATTTTT
 CAGAAATGACAGAATCCACTGATTACCTCTACAAGGACCCAAAGCAGCAGAAAGATCTACGACCTATTCCA
 GAAGTCTTTGAGAAAGAAGGAAGTATGAGCTCCTGGAAGCAGCAGAGTCTTTGACCCAGGAAGT
 GCTTCAGGAACATCTGGAAGTAGTCCCAAGACATGGGAGACACCCTGGATGAAAGCTCATTGACAGCCA
 GTCCACAGAAGAAAAGGAGATTTGAATTTTTGATAACTGGGACAGCTTACGTCTCCCTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG226275 representing NM_001127207
 Red=Cloning site Green=Tags(s)

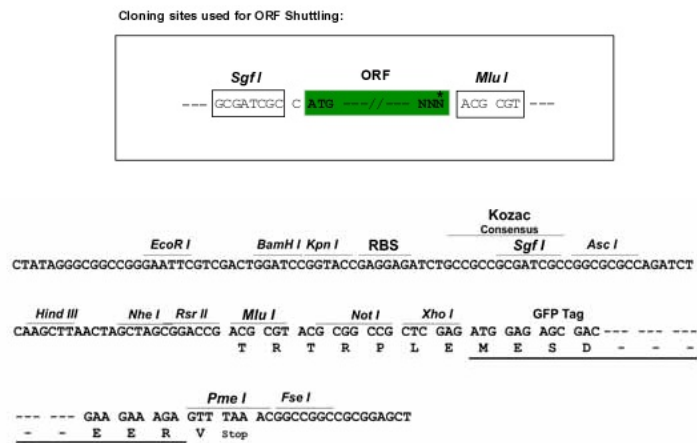
```
MSLPLTEEQRKKIEENRQKALARRAEKLLAEQHQR TSSGTSIAGNPFQAKQGSPSQNFPRESCKPVSHGVI
FKQONLSSSSNADQRPDHSFSFQAKGIWKKPEEMPTACPGHSPRSQMAL TGISPPLAQSPPEVPKQQLLS
YELGQGHAAQASPEIRFTPFANPTHKPLAKPKSSQETPAHSSGQPPRDAKLEAKTAKASPSGQNI SIYIHSS
SESVTPRTEGRLQKQSGSSVQKGVNSQK GKCVRNGDRFQVLIGYNAELIAVFKTLP SKNYDPDTKTWNFS
MNDYSALMKAQSLPTVNLQPLEWAYGSSESPSTSSEGGAGLPSAPLSL FVKGRCLMISRAYFEADISYS
QDLIALFKQMSRRYDVKTRKWSFLLEEHSKLI AKVRCLPQVQLDPLPTTLT LAFASQLKKTSLSLTPDV
PEADLSEVDPKLVSNLMPFQRAGVNF AIAKGGRLLLADDMGLGKTIQAICIAAFYRKEWPLL VVVVPSVVR
FTWEQAFRLRWLPSLSPDCINVVVTGKDRL TAGLINIVSFDLLSKLEKQLKTPFKVVIIDESHFLKNSRTA
RCRAAMPVLKVAKRVILLSGTPAMSRPAEL YTI IAVKPTFFPQFHAFGLRYCDAKRMPWGDYSGSSNL
GELKLLLEEAVMLRRLKSDVLSQLPAKQRKIVVIAPGRINARTRAA LDAAAKEMTTKDKTKQQKDALIL
FFNRTAEAKIPSVIEYILDLES GREKFLVFAHHKVVLDAITQELERKHVQHIRIDGSTSSAEREDLCQQ
FQLSERHAVAVLSITAA NMGLTFSSADLVVFAELFWNPGVLIQAEDRVHRIGQTS SVGIHYLVAKGTADD
YLWPLIQEKIKVLAEAGLSETNFSEMTESTDYL YKDPKQKQIYDLFQKSF EKEGSDMELLEAAESFDPGS
ASGTS GSSSQNMGDTLDESSLTASPQKRRFEFFDNWDSFTSPL
```

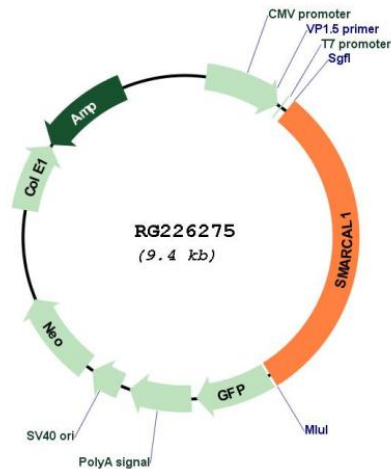
TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_001127207

ORF Size: 2862 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_001127207.2](#)

RefSeq Size: 3095 bp

RefSeq ORF: 2865 bp

Locus ID: 50485

UniProt ID: [Q9NZC9](#)

Cytogenetics: 2q35

Protein Families: Druggable Genome

Gene Summary: The protein encoded by this gene is a member of the SWI/SNF family of proteins. 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 shows sequence similarity to the E. coli RNA polymerase-binding protein HepA. Mutations in this gene are a cause of Schimke immunoosseous dysplasia (SIOD), an autosomal recessive disorder with the diagnostic features of spondyloepiphyseal dysplasia, renal dysfunction, and T-cell immunodeficiency. [provided by RefSeq, Jul 2008]