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Product datasheet for MR211537

Smarca5 (NM_053124) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Smarca5 (NM_053124) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Smarca5
Synonyms:	4933427E24Rik; D030040M08Rik; D330027N15Rik; MommeD4; Snf2h
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR211537 representing NM_053124
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCGTCCGCGGTGGAGCCTCCGCCGCCCCCGCCTCCCGAGAGCGCGCCTTCCAAGCCCTCGGCGGCGG
GCGCCGGCGGGAGCAGCAGCGGCAACAAAGGCGGCCCCGAGGGCGGCGCGGCGCCCGCGGCTCCGTGTGC
TGCGGGCTCGGGCCCCGCGGACACCGAGATGGAGGAAGTATTTGATCATGGATCACCTGGAAAGCAAAAA
GAAATCCAAGAACCAGATCCTACATATGAAGAAAAAATGCAAACTGACCGAGCAAATAGATTTGAGTATT
TATTAAAGCAGACAGAGCTGTTCGCACATTTCATTCAGCCTGCTGCTCAGAAGACTCCAACCTCACCCTT
GAAGATGAAACCAGGGCGCCCACGGGTAAAAAAGGATGAAAAACAGAATTTGCTTTCAGTTGGAGATTAC
CGACACCGTAGAACGGAGCAAGAGGAGGATGAAGAGCTATTAACAGAAAGTTCCAAAGCAACTAATGTTT
GTACTCGATTTGAAGATTCTCCATCATATGTAAAATGGGGTAAACTGAGAGATTATCAGGTGCGAGGATT
GAATTGGCTCATCTCTCTGTATGAGAATGGCATCAATGGGATCCTTGCAGATGAAATGGGTTTGGGAAAG
ACACTTCAAACAATTTCTCTTCTTGGATACATGAAACACTATAGAAATATTCCTGGTCCTCATATGGTTT
TGGTTCCCAAGTCTACATTGCACAACTGGATGAGTGAATTCAAGAAATGGGTACCAACACTTAGGTCTGT
TTGCTTGATAGGAGATAAAGAGCAAAGAGCTGCATTTGTCAGGGATGTTTTATTACCAGGAGAGTGGGAT
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TAGTTATAGATGAAGCTCACAGGATAAAAAATGAAAAATCTAAGTTGTCAGAAATAGTGAGAGAATTCAA
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GAATGGTATACTCGGATATTAATGAAAGATATAGACATATTAAACTCAGCAGGGAAGATGGACAAAATGA
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TGGTCCACCGTACACAACAGATATGCATCTAGTTACCAACAGTGGCAAGATGGTGGTGTTAGACAAGCTA

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CTCCCTAAACTGAAAGAACAAGGTTCAAGAGTACTAATCTTTAGTCAGATGACAAGAGTATTAGACATTT
TGGAAGATTATTGCATGTGGAGAAATTATGAGTACTGCAGGTTGGATGGACAGACACCCCATGATGAGAG
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CAAAGAAGAATAAGTATCAAGAAAGCACTAGATACAAAGATTGGACGGTACAAAGCACCCTTTCATCAGC
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CTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR211537 representing NM_053124
Red=Cloning site Green=Tags(s)

MSSAVEPPPPPPPESAPSKPSAAGAGGSSSGNKGGPEGGAAPAAPCAAGSGPADTEMEEVFDHGSPGKQK
EIQEPDPTYEEKMQTDRANRFEYLLKQTELFAHFIQPAAQKTPTSPLKMKPGRPRVKKDEKQNLLSVGDY
RHRRTEQEEDEELLTESSKATNVCTRFEDSPSYVKWGKLRDYQVRGLNWLISLYENGINGILADEMGLGK
TLQTISLLGYMKHYRNIPGPHMVLVPKSTLHNWMSEFKKWVPTLRSVCLIGDKEQRAAFVRDVLLPGEWD
VCVTSYEMLIKEKSVFKKFNWRYLVIDEAHRIKNEKSKLSEIVREFKTTNRLLLTGTPLQNNLHELWSLL
NFLLPDVFNSADDFDSWFDTNNCLGDQKLVERLHMVLRPFLLRRIKADVEKSLPPKKEVKIYVGLSKMQR
EWYTRILMKDIDILNSAGKMDKMRLLNILMQLRKCCNHPYLFDGAEPGPPYTTDMHLVTNSGKMVVLDKL
LPKLKEQGSRVLIFSQMTRVLDILEDYCMWRNYEYCRLDGQTPHDERQDSINAYNEPNSTKFVFMLSTRA
GGLGINLATADVVILYDSDWNPQVDLQAMDRAHRIGQTKTVRVFRFITDNTVEERIVERAEMKLRLDSIV
IQQGRLVDQNLNKIGKDEMLQMIRHGATHVFASKESEITDEDIDGILERGAKKTAEMNEKLSKMGESSLR
NFTMDTESSVYNFEGEDYREKQKIAFTEWIEPPKRERKANYAVDAYFREALRVSEPKAPKAPRPPKQPNV
QDFQFFPPRLFELLEKEILYYRKTIGYKVPRSPDLPNAAQAQKEEQLKIDEAEPLNDEELEEKEKLLTQG
FTNWNKRDFNQFIKANEKWGRDDIENIAREVEGKTPEEVIEYSAVFWERCNELQDIEKIMAQIERGEARI
QRRISIKKALDTKIGRYKAPFHQLRISYGTNKGKNYTEEEDRFLICMLHKLGFDKENVYDELRQCIRNSP
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L

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9040_g06.zip

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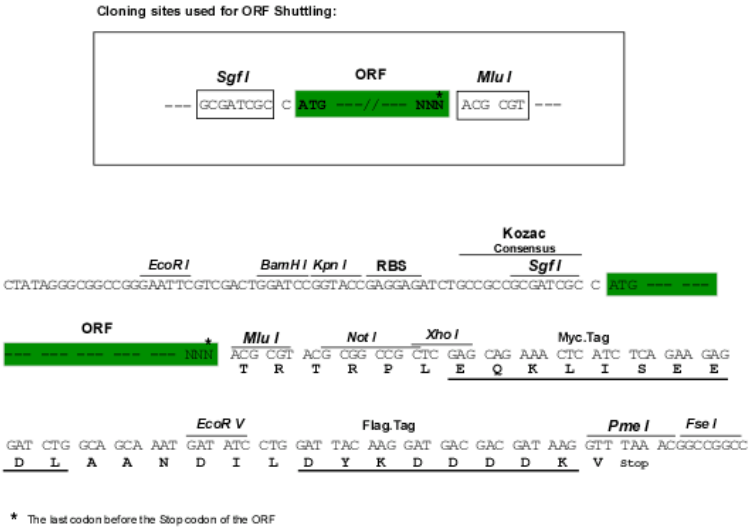
Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_053124

ORF Size: 3153 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_053124.2, NP_444354.2

RefSeq Size: 4658 bp

RefSeq ORF: 3156 bp

Locus ID: 93762

UniProt ID: Q91ZW3

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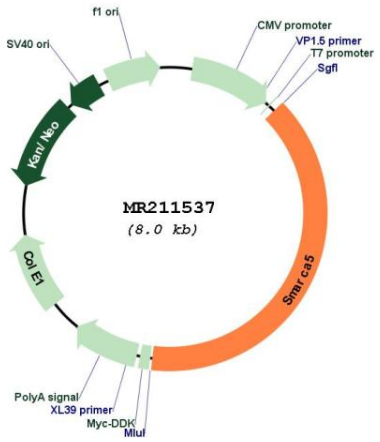
Cytogenetics: 8 C2

MW: 122.1 kDa

Gene Summary: Helicase that possesses intrinsic ATP-dependent nucleosome-remodeling activity. Complexes containing SMARCA5 are capable of forming ordered nucleosome arrays on chromatin; this may require intact histone H4 tails. Also required for replication of pericentric heterochromatin in S-phase specifically in conjunction with BAZ1A. Probably plays a role in repression of polI dependent transcription of the rDNA locus, through the recruitment of the SIN3/HDAC1 corepressor complex to the rDNA promoter. Essential component of the WICH complex, a chromatin remodeling complex that mobilizes nucleosomes and reconfigures irregular chromatin to a regular nucleosomal array structure. The WICH complex regulates the transcription of various genes, has a role in RNA polymerase I and RNA polymerase III transcription, mediates the histone H2AX phosphorylation at 'Tyr-142', and is involved in the maintenance of chromatin structures during DNA replication processes. Essential component of the NoRC (nucleolar remodeling complex) complex, a complex that mediates silencing of a fraction of rDNA by recruiting histone-modifying enzymes and DNA methyltransferases, leading to heterochromatin formation and transcriptional silencing.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR211537

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