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Product datasheet for MR203917

Smn1 (NM_011420) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Smn1 (NM_011420) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Smn1
Synonyms:	AI849087; Gemin1; Smn
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR203917 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGATGGGCAGTGGCGGAGCGGGCTCCGAGCAGGAAGATACGGTGCTGTTCCGGCGTGGCACCGGCC
AGAGTGATGATTCTGACATTTGGGATGATACAGCATTGATAAAAGCTTATGATAAAGCTGTGGCTTCCTT
TAAGCATGCTCTAAAGAACGGTGACATTTGTGAAACTCCAGATAAGCCAAAAGGCACAGCCAGAAGAAAA
CCTGCCAAGAAGAATAAAAGCCAAAAGAAGAATGCCACAACTCCCTTGAAACAGTGGAAAGTTGGTGACA
AGTGTTCTGCTGTTTGGTCAGAAGACGGCTGCATTTACCCAGCTACTATTACGTCCATTGACTTTAAGAG
AGAAACCTGTGTCGTGGTTTATACTGGATATGGAAACAGAGAGGAGCAAAACTTATCTGACCTACTTTCC
CCGACCTGTGAAGTAGCTAATAGTACAGAACAGAACACTCAGGAGAATGAAAGTCAAGTTTCCACAGACG
ACAGTGAACACTCCTCCAGATCGCTCAGAAGTAAAGCACACAGCAAGTCCAAAGCTGCTCCGTGGACCTC
ATTTCTTCCTCCACCACCCCCAATGCCAGGGTCAGGATTAGGACCAGGAAAGCCAGGTCTAAAATTCAAC
GGCCCGCCGCCGCCGCCTCCACTACCCCCTCCCCCCTTCCTGCCGTGCTGGATGCCCCCGTTCCCTTCAG
GACCACCAATAATCCCGCCACCCCCTCCCATCTCTCCCGACTGTCTGGATGACACTGATGCCCTGGGCAG
TATGCTAATCTCTTGGTACATGAGTGGCTACCACACTGGCTACTATATGGGTTTCAGACAAAATAAAAAA
GAAGGAAAGTGCTCACATACAAAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

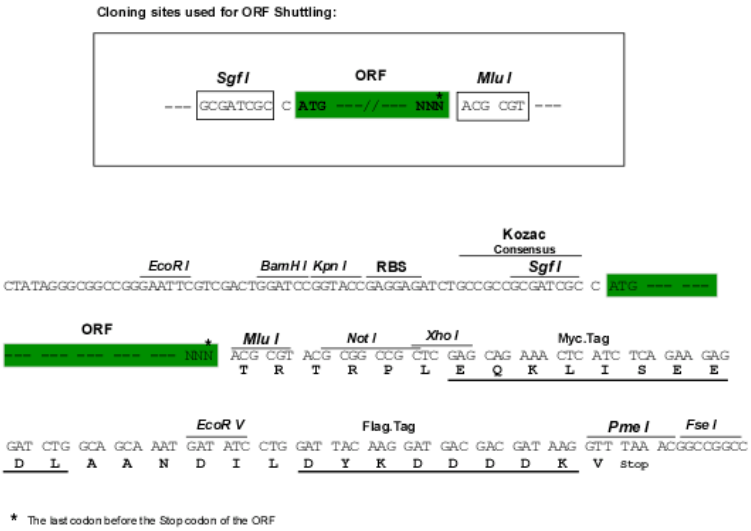
>MR203917 protein sequence
Red=Cloning site Green=Tags(s)

MAMGSGGAGSEQEDTVLFRRGTGQSDDSDIWDDTALIKAYDKAVASFKHALKNGDICETPDKPKGTARRK
PAKKNKSQKKNATTPLKQWKVGDKCSAVWSEDGCIYPATITSIDFKRETCVVVYTGYGNREEQNLSDLLS
PTCEVANSTEQNTQENESQVSTDDSEHSSRSLRSKAHSKSKAAPWTSFLPPPPPMPGSGLGPGKPGLKFN
GPPPPPPLPPPPFLPCWMPPFPSGPPIIPPPPPISPDCLDDTDALGSMLISWYMSGYHTGYYMGFRQNKK
EGKCSHTN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_011420

ORF Size: 867 bp

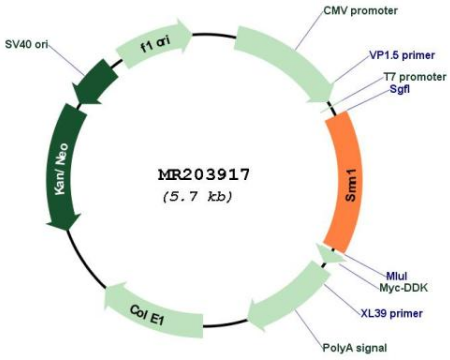
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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_011420.2
RefSeq Size:	1227 bp
RefSeq ORF:	867 bp
Locus ID:	20595
UniProt ID:	P97801
Cytogenetics:	13 52.99 cM
MW:	31.3 kDa
Gene Summary:	The SMN complex plays a catalyst role in the assembly of small nuclear ribonucleoproteins (snRNPs), the building blocks of the spliceosome. Thereby, plays an important role in the splicing of cellular pre-mRNAs. Most spliceosomal snRNPs contain a common set of Sm proteins SNRPB, SNRPD1, SNRPD2, SNRPD3, SNRPE, SNRPF and SNRPG that assemble in a heptameric protein ring on the Sm site of the small nuclear RNA to form the core snRNP. In the cytosol, the Sm proteins SNRPD1, SNRPD2, SNRPE, SNRPF and SNRPG are trapped in an inactive 6S pICln-Sm complex by the chaperone CLNS1A that controls the assembly of the core snRNP. Dissociation by the SMN complex of CLNS1A from the trapped Sm proteins and their transfer to an SMN-Sm complex triggers the assembly of core snRNPs and their transport to the nucleus. Ensures the correct splicing of U12 intron-containing genes that may be important for normal motor and proprioceptive neurons development. Also required for resolving RNA-DNA hybrids created by RNA polymerase II, that form R-loop in transcription terminal regions, an important step in proper transcription termination. May also play a role in the metabolism of small nucleolar ribonucleoprotein (snoRNPs).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR203917