

Product datasheet for RC201623

Gemin 1 (SMN2) (NM_022875) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gemin 1 (SMN2) (NM_022875) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Gemin 1
Synonyms:	BCD541; C-BCD541; GEMIN1; SMNC; TDRD16B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC201623 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGCGATGAGCAGCGCGGCAGTGGTGGCGCGTCCCGGAGCAGGAGGATTCGGTGTGTTCCGGCGCG
GCACAGGCCAGAGCGATGATTCTGACATTTGGGATGATACAGCACTGATAAAAGCATATGATAAAGCTGT
GGCTTCATTTAAGCATGCTCTAAAGAATGGTGACATTTGTGAACTTCGGGTAACCAAAAACCACCT
AAAAGAAAACCTGCTAAGAAGAATAAAAGCCAAAAGAAGAATACTGCAGCTTCCTACAACAGTGGAAAG
TTGGGGACAAATGTTCTGCCATTTGGTCAGAAGACGGTTGCATTTACCCAGCTACCATTGCTTCAATTGA
TTTTAAGAGAGAAACCTGTGTTGTGTTTACACTGGATATGGAAATAGAGAGGAGCAAAATCTGTCCGAT
CTACTTTCCCAATCTGTGAAGTAGCTAATAATAGAACAGAATGCTCAAGAGAATGAAATGAAAGCC
AAGTTTCAACAGATGAAAGTGAGAACTCCAGGTCTCCTGGAAATAAATCAGATAACATCAAGCCCAATC
TGCTCCATGGAACCTTTTCTCCCTCCACCACCCCCCATGCCAGGGCCAAGACTGGGACCAGGAAAGCCA
GGTCTAAAATTCATGGCCACCACCGCCACCACCACCACCACCTTACTATCATGCTGGCTGC
CTCCATTTCTTGGACCACCAATAATCCCCACCACCTCCCATATGTCCAGATTCTCTTGATGATGC
TGATGCTTTGGGAAGTATGTTAATTTATGGTACATGAGTGGCTATCATACTGGCTATTATATGAAATG
CTGGCA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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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_022875.1](#), [NP_075013.1](#)

RefSeq Size: 1580 bp

RefSeq ORF: 849 bp

Locus ID: 6607

UniProt ID: [Q16637](#)

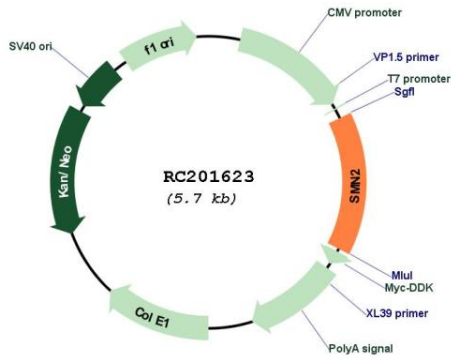
Cytogenetics: 5q13.2

Protein Families: Druggable Genome

MW: 30.5 kDa

Gene Summary: This gene is part of a 500 kb inverted duplication on chromosome 5q13. This duplicated region contains at least four genes and repetitive elements which make it prone to rearrangements and deletions. The repetitiveness and complexity of the sequence have also caused difficulty in determining the organization of this genomic region. The telomeric and centromeric copies of this gene are nearly identical and encode the same protein. While mutations in the telomeric copy are associated with spinal muscular atrophy, mutations in this gene, the centromeric copy, do not lead to disease. This gene may be a modifier of disease caused by mutation in the telomeric copy. The critical sequence difference between the two genes is a single nucleotide in exon 7, which is thought to be an exon splice enhancer. Note that the nine exons of both the telomeric and centromeric copies are designated historically as exon 1, 2a, 2b, and 3-8. It is thought that gene conversion events may involve the two genes, leading to varying copy numbers of each gene. The full length protein encoded by this gene localizes to both the cytoplasm and the nucleus. Within the nucleus, the protein localizes to subnuclear bodies called gems which are found near coiled bodies containing high concentrations of small ribonucleoproteins (snRNPs). This protein forms heteromeric complexes with proteins such as SIP1 and GEMIN4, and also interacts with several proteins known to be involved in the biogenesis of snRNPs, such as hnRNP U protein and the small nucleolar RNA binding protein. Four transcript variants encoding distinct isoforms have been described. [provided by RefSeq, Sep 2008]

Product images:



Circular map for RC201623