

Product datasheet for **RC223633**

SPG7 (NM_199367) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SPG7 (NM_199367) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SPG7
Synonyms:	CAR; CMAR; PGN; SPG5C
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC223633 ORF sequence, **codon optimized**.
 Due to the complexity of NM_199367, the ORF clone is codon optimized for mammalian Expression.
 The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**GCGATCGCC**

ATGGCCGTTCTTCTGCTCCTTCTGAGAGCATTGCGCAGGGGCCCGACCTGGTCCCGACCATTGTGGG
 GACCAGGTCCAGCTTGGAGCCCTGGTTTTCCCGCTCGCCCTGGGAGGGTAGACCCTACATGGCCTCCCG
 CCCCCGGGAGACTTGGCAGAAGCCGGTGGCAGGGCATTGCAAAGTCTCCAGCTGAGACTGCTGACCA
 ACATTCGAGGGAATCAATGGTCTTCTGCTGAAGCAGCACCTGGTCCAGAATCCGGTGCAGGCTGTGGCAGC
 TCCTCGGGGGGACCTTTTATTTAATACAGCCGGCTGAAACAAAAGAATAAAGAGAAGGACAAGTCCAA
 AGGGAAGGCCCGAGAAGAGGACGAAGAAGAACGGCGCCGAGAGAGAGGGATGATCAGATGTACAGGGAA
 AGACTGCGGACCCTGTTGGTAATTGCGGTGTTATGTCACCTCTGAACGCCTTGTCCACCAGCGCGGAT
 CTATCTCTGGAACGATTCGTGCATGAAATGCTTGCTAAAGGGGAGGTGCAGCGGTGCAGGTAGTTCC
 TGAGTCCGACGTGGTGGAGGTTTATCTGCACCCCGAGCGGTGGTGTTCGGAAGACCTCGGCTGGCCCTG
 ATGTACAGAAATGCAAGTGGCTAACATTGATAAGTTCGAGGAGAAGCTGCGGGCTGCTGAGGACGAACTTA
 ATATTGAGGCCAAAGACAGGATACCCGTCAGTTACAAGAGGACCGGCTTCTTTGGCAATGCGCTGACTC
 AGTGGGCATGACGGCCGTGGGACTGGCCATTTTGGTACGTGTTTCGGCTTGTGGAATGACAGGAAGG
 GAAGGTGGCTTTTCAGCTTTCAATCAGCTGAAGATGGCAGGATTACCATCGTGGATGGCAAGATGGGCA
 AAGGAGTGAGCTTTAAGGACGTGGCTGGCATGCATGAAGCCAAGCTGGAAGTGCGGGAATTCGTGGACTA
 TCTGAAATCCCCGAAAGATTTCTCCAGCTGGGTGCCAAGTTCTAAGGGCGCCCTGCTGCTCGGGCCA
 CCAGGATGTGGCAAAACGCTGCTGGCAAAAGCCGTGGCCACGGAGGCACAAGTGCCTTTCTGGCAATGG
 CGGGCCCTGAATTTGTTGAAGTATTGGCGCCCTCGGAGCAGCCCGGTTAGAAGTTTGTCAAGGAAGC
 ACGAGCTCGGGCTCCATGCATCGCTACATCGACGAGATCGACGAGTGGGAAAAAACGAAGCACCACC
 ATGAGTGGCTTTTCTAATACCGAGGAGGAACAGACACTGAACCAGCTGCTGGTTGAGATGGACGGTGCCA
 GCCTTGATCAACTGCCCTCCAAGGTACCATGAGGAAGCTCAGGGGAAAGACTCCAGCCTGTTCTTGCTT
 GACCGAACCCACCGGCTCAAGAAGGCCATGGAGGGACACAGTCTGTGTTGGGGATGCCTCTTGAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC223633 representing NM_199367
 Red=Cloning site Green=Tags(s)

MAVLLLLLRLRRGPGPRPLWGPAPWSPGFARPGRGRPYMASRPPGDLAEAGGRALQSLQLRLLTP
 TFEINGLLLLKQHLVQNPVRLWQLLGGTFYFNTRSRLKQKNKEKDKSKGKAPEDEEERRRERDDQMYRE
 RLRTLLVIAVMSLLNALSTSGGSIWNDFVHEMLAKGEVQRVQVVPESDVVEVYLHPGAVVFGPRRLAL
 MYRMQVANIDKFEEKLRAAEDELNIEAKDRIPVSYKRTGFFGNALYSVGMTAVGLAILWYVFRLAGMTGR
 EGGFAFNQLKMARFTIVDGKMGKGVSKFDVAGMHEAKLEVREFVDYLKSPERFLQLGAKVPGKALLLGP
 PGCGKTLAKAVATEAQVPFLAMAGPEFVEVIGGLGAARVRSLFKEARARAPCIVYIDEIDAVGKKRSTT
 MSGFSNTEEEQTLNQLL VEMDGASLDQLPSQGTMRKLRGKTPACSCLEPTGSRRAMEGHSLCWGCLLH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_199367

ORF Size: 1467 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_199367.1](#), [NM_199367.2](#), [NP_955399.1](#)

RefSeq Size: 2328 bp

RefSeq ORF: 1470 bp

Locus ID: 6687

UniProt ID: [Q9UQ90](#)

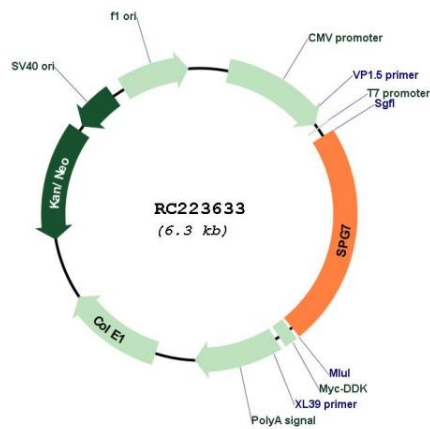
Cytogenetics: 16q24.3

Protein Families: Protease, Transmembrane

MW: 53.9 kDa

Gene Summary: This gene encodes a mitochondrial metalloprotease protein that is a member of the AAA family. Members of this protein family share an ATPase domain and have roles in diverse cellular processes including membrane trafficking, intracellular motility, organelle biogenesis, protein folding, and proteolysis. Mutations in this gene cause autosomal recessive spastic paraplegia 7. Two transcript variants encoding distinct isoforms have been identified. [provided by RefSeq, Mar 2014]

Product images:



Circular map for RC223633