

Product datasheet for **RG223633**

SPG7 (NM_199367) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SPG7 (NM_199367) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SPG7
Synonyms:	CAR; CMAR; PGN; SPG5C
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG223633 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)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCCGTTCTTCTGCTCCTTCTGAGAGCATTGCGCAGGGGCCCGACCTGGTCCCGACCATTGTGGG
 GACCAGGTCCAGCTTGGAGCCCTGGTTTTCCCGCTCGCCCTGGGAGGGGTAGACCCTACATGGCCTCCCG
 CCCCCGGGAGACTTGGCAGAAGCCGGTGGCAGGGCATTGCAAAGTCTCCAGCTGAGACTGCTGACACCA
 ACATTCGAGGGAATCAATGGTCTTCTGCTGAAGCAGCACCTGGTCCAGAATCCGGTGC GGCTGTGGCAGC
 TCCTCGGGGGGACCTTTTATTTAATACAGCCGGCTGAAACAAAAGAATAAAGAGAAGGACAAGTCCAA
 AGGGAAGGCCCCAGAAGAGGACGAAGAAGAACGGCGCCGAGAGAGAGGGATGATCAGATGTACAGGGAA
 AGACTGCGGACCCTGTTGGTAATTGCGGTGTTATGCTACTCCTGAACGCCTTGTCCACCAGCGCGGGAT
 CTATCTCTGGAACGATTTCTGTCATGAAATGCTTGCTAAAGGGGAGGTGCAGCGGGTGCAGGTAGTTCC
 TGAGTCCGACGTGGTGGAGGTTTATCTGCACCCCGGAGCGGTGGTGTTCGGAAGACCTCGGCTGGCCCTG
 ATGTACAGAATGCAAGTGGCTAACATTGATAAGTTCGAGGAGAAGCTGCGGGCTGCTGAGGACGAACTTA
 ATATTGAGCCAAAGACAGGATACCCGTCAGTTACAAGAGGACCGGCTTCTTTGGCAATGCGCTGTA
 AGTGGGCATGACGGCCGTGGGACTGGCCATTTTGGTGGTACGTGTTTCGGCTTGTGGAATGACAGGAAGG
 GAAGGTGGCTTTTTCAGCTTTCAATCAGCTGAAGATGGCAGGATTACCATCGTGGATGGCAAGATGGGCA
 AAGGAGTGAGCTTTAAGGACGTGGCTGGCATGCATGAAGCCAAGCTGGAAGTGCGGGAATTCGTGGACTA
 TCTGAAATCCCCGAAAGATTTCTCCAGCTGGGTGCCAAGTTCTAAGGGCGCCCTGCTGCTCGGGCCA
 CCAGGATGTGGCAAAACGCTGCTGGCAAAAGCCGTGGCCACGGAGGCACAAGTGCCTTTCTGGCAATGG
 CGGGCCCTGAATTTGTTGAAGTATTGGCGCCCTCGGAGCAGCCCGGTTAGAAGTTTGTCAAGGAAGC
 ACGAGCTCGGGCTCCATGCATCGTCTACATCGACGAGATCGACGCAGTGGGAAAAAACGAAGCACCACC
 ATGAGTGGCTTTTCTAATACCGAGGAGGAACAGACACTGAACCAGCTGCTGGTTGAGATGGACGGTGCCA
 GCCTTGATCAACTGCCCTCCAAGGTACCATGAGGAAGCTCAGGGGAAAGACTCCAGCCTGTTCTTGCTT
 GACCGAACCCACCGGCTCAAGAAGGCCATGGAGGGACACAGTCTGTGTTGGGGATGCCTCTTGAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG223633 representing NM_199367
 Red=Cloning site Green=Tags(s)

MAVLLLLLRALRRGPGPRPLWGPAPWSPGFARPGRGRPYMASRPPGDLAEGRALQSLQLRLLTP
 TFEGINGLLLKQHLVQNPVRLWQLLGGTFYFNTSRLKQKNKEKDKSKGKAPEDEEERRRRERDDQMYRE
 RLRLTLVIAVMSLLNALSTSGGSIWNDFVHMLAKGEVQRVQVVPESDVVEVYLHPGAVVFGPRPAL
 MYRMQVANIDKFEEKLRAAEDELNIEAKDRIPVSYKRTGFFGNALYSVGMTAVGLAILWYVFRLAGMTGR
 EGGFSAFNQLKMARFTIVDGKMGKGVSKDVAGMHEAKLEVREFVDYLKSPERFLQLGAKVPKGALLLGP
 PCCGKTLAKAVATEAQVPFLAMAGPEFVEVIGGLGAARVRSLFKEARARAPCIVYIDEIDAVGKKRSTT
 MSGFSNTEEEQTLNQLL VEMDGASLDQLPSQGTMRKLRGKTPACSCLEPTGSRAMEGHSLCWGCLLH

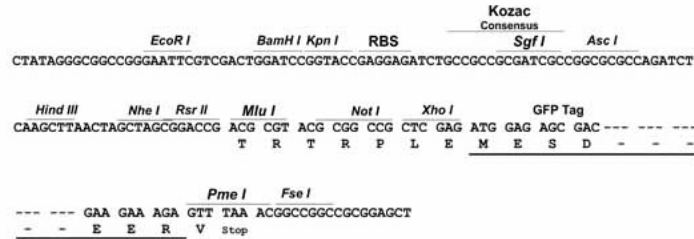
TRTRPLE - GFP Tag - V

Restriction Sites:

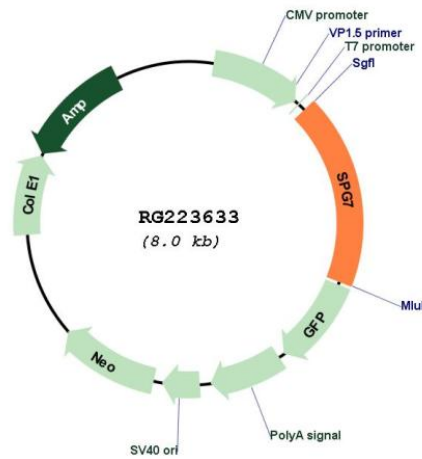
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



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:	<ol style="list-style-type: none">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 , NP_955399.1
RefSeq Size:	2328 bp
RefSeq ORF:	1470 bp
Locus ID:	6687
UniProt ID:	Q9UQ90
Cytogenetics:	16q24.3
Protein Families:	Protease, Transmembrane
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]