

Product datasheet for **RG214100**

Spastin (SPAST) (NM_199436) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Spastin (SPAST) (NM_199436) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Spastin
Synonyms:	ADPSP; FSP2; SPG4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG214100 representing NM_199436
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGAATTCCTCGGGTGGACGAGGGAAGAAGAAAGGCTCCGGCGGCCAGCAACCCGGTGCCTCCCAGGC
 CTCGCCCCCTTGCTTGCCCCCGCCCCCTCCGCGCGGGCCGGCCCCCTCCGCCGAGTCGCCGATAA
 GCGGAACCTGTACTATTTCTCTACCCGCTGTTTGTAGGCTTCGCGCTGCTGCGTTTGGTCGCTTCCAC
 CTGGGGCTCCTCTCGTGTGGCTCTGCCAGCGCTTCTCCGCGCCCTCATGGCAGCAAGAGGAGCTCCG
 GGGCCGCGCCAGCACCTGCCTCGGCTCGGCCCGGGCCGGTCCGGGGCGGAGGCCGAGCGCTCCG
 AGTCTTCCACAAACAGGCCTTCGAGTACATCTCCATTGCCCTGCGCATCGATGAGGATGAGAAAGCAGGA
 CAGAAGGACAAGCTGTGAATGGTATAAGAAAGGTATTGAAGAACTGGAAAAAGGAATAGCTGTTATAG
 TTACAGGACAAGGTGAACAGTGTAAAGAGCTAGACGCCCTCAAGCTAAAATGATGACTAATTTGGTTAT
 GGCCAAGGACCGCTTACAACCTTCTAGAAAGTGGAGCTGTCCAAAAAGAAAAGACCCCTTAACACACACT
 AGTAATCACTGCCTCGTTCAAAAACAGTTATGAAAACCTGGATCTGCAGGCCCTTTCAGGCCACCATAGAG
 CACCTAGTTACAGTGGTTTATCCATGGTTTCTGGAGTGAACAGGGATCTGGTCCTGCTCCTACCACTCA
 TAAGGGTACTCCGAAAACAAATAGGACAAATAAACCTTCTACCCCTACAACCTGCTACTCGTAAGAAAAAA
 GACTTGAAGAATTTTAGGAATGTGGACAGCAACCTTGCTAACCTTATAATGAATGAAATGTGGACAATG
 GAACAGCTGTTAAATTTGATGATATAGCTGGTCAAGACTTGGCAAAACAAGCATTGCAAGAAATGTTAT
 TCTTCTTCTCTGAGGCTGAGTGTTCACAGGGCTTAGAGCTCCTGCCAGAGGGCTGTTACTCTTTGGT
 CCACCTGGGAATGGGAAGACAATGCTGGCTAAAGCAGTAGCTGCAGAATCGAATGCAACCTCTTTTGTCT
 TAAGTGTGCAAGTTAACTTCAAAATACGTGGGAGAAGGAGAGAAATTTGGTGGGGCTCTTTTGTCTGT
 GGCTCGAAGAACTCAACCTTCTATAATTTTATAGATGAAGTTGATAGCCTTTTGTGTGAAAGAAGAGAA
 GGGGAGCACGATGCTAGTAGCGCTAAAAACTGAATTTCTAATAGAATTTGATGGTGTACAGTCTGCTG
 GAGATGACAGAGTACTTGAATGGGTGCAACTAATAGGCCACAAGAGCTTATGAGGCTGTTCTCAGGCG
 TTTTCATCAAACGGGTATATGTGTCTTACCAAATGAGGAGACAAGACTACTTTTGTCTAAAAATCTGTTA
 TGTAAACAAGGAAGTCCATTGACCCAAAAAGAACTAGCACAACCTGCTAGAATGACTGATGGATACTCAG
 GAAGTACCTAACAGCTTTGGCAAAAGATGCAGCACTGGGTCCTATCCGAGAACTAAAACCAGAACAGGT
 GAAGAATATGTCTGCCAGTGAAGATGAGAAATATTCGATTATCTGACTTCACTGAATCCTTAAAAAATA
 AAACGCAGCGTCAGCCCTCAAACCTTAGAAGCGTACATACGTTGGAACAAGGACTTTGGAGATACCAGT
 TT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG214100 representing NM_199436
 Red=Cloning site Green=Tags(s)

MNSPGGRGKKKSGGASNPVPPRPPPPCLAPAPPAAGPAPPPEPHKRNLYYFSYPLFVGFALLRLVAFH
 LGLLFWVLCQRFSRALMAAKRSSGAAPAPASASAPAPVPGGEAERVRFHKQAFYIISIALRIDEDEKAG
 QKEQAVEWYKKGIEELEKGI AVIVTQGQECERARRLQAKMMTNLVMKDRLQLLESGAVPKRKDPLTHT
 SNSLPRSKTVMKTGSAGLSGHRAPSYGLSMVSGVKQSGPAPTTTHKGTPTNRTNKPSTPTTATRKKK
 DLKNFRNVDSNLANLIMNEIVDNGTAVKFDDIAGQDLAKQALQEIVILPSLRPELFTGLRAPARGLLLF
 PPGNGKTMLAKAVAAESNATFFNI SAASLTSKYVGEKEKLVRALFAVARELQPSIIFIDEVDSLCCERRE
 GEHDASRRLKTEFLIEFDGVQSAGDDRVLVMGATNRPQELDEAVLRRFIKRVYVSLPNEETRLLLLKNLL
 CKQGSPLTQKELAQ LARMTDGYSGSDLTALAKDAAL GPIRELKPEQVKNMSASEMRNIRLSDFTESLKKI
 KRSVSPQTL EAYIRWNKDFGDTTV

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_199436

ORF Size: 1752 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_199436.2](#)

RefSeq Size: 5125 bp

RefSeq ORF: 1755 bp

Locus ID: 6683

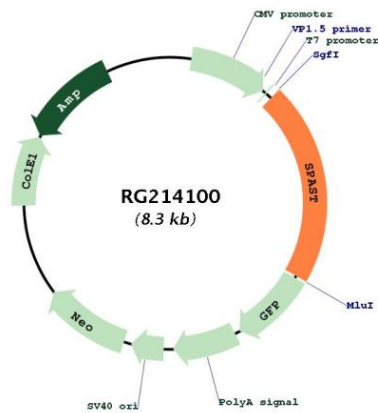
UniProt ID: [Q9UBP0](#)

Cytogenetics: 2p22.3

Protein Families: Druggable Genome, Transmembrane

Gene Summary: This gene encodes a member of the AAA (ATPases associated with a variety of cellular activities) protein 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. The use of alternative translational initiation sites in this gene results in a single transcript variant that can produce isoforms that differ in the length of their N-terminus and which thereby differ in the efficiency of their export from the nucleus to the cytoplasm. In addition, alternative splicing results in multiple transcript variants that encode isoforms that differ in other protein regions as well. One isoform of this gene has been shown to be a microtubule-severing enzyme that regulates microtubule abundance, mobility, and plus-end distribution. Mutations in this gene cause the most frequent form of autosomal dominant spastic paraplegia 4. [provided by RefSeq, May 2018]

Product images:



Circular map for RG214100