

## Product datasheet for **RC214100**

### 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:	Myc-DDK
Symbol:	SPAST
Synonyms:	ADPSP; FSP2; SPG4
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



[View online »](#)

**ORF Nucleotide Sequence:**

>RC214100 representing NM\_199436  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

ATGAATTCCTCGGGTGGACGAGGGAAGAAGAAAGGCTCCGGCGGCCAGCAACCCGGTGCCTCCCAGGC  
 CTCGCCCCCTTGCTTGCCCGCCCTCCCGCCGGCCGGCCCTCCGCCGAGTCGCCGATAA  
 GCGGAACCTGTACTATTTCTCTACCCGCTGTTTGTAGGCTTCGCGCTGCTGCGTTTGGTCGCTTCCAC  
 CTGGGGCTCCTTCTGCTGGCTCTGCCAGCGCTTCTCCCGCCCTCATGGCAGCAAGAGGAGCTCCG  
 GGGCCGCGCCAGCACCTGCCTCGGCTCGGCCCGGCCGGTCCGGGGCGGAGGCCGAGCGCTCCG  
 AGTCTTCCACAAACAGGCCTTCGAGTACATCTCCATTGCCCTGCGCATCGATGAGGATGAGAAAGCAGGA  
 CAGAAGGAGCAAGCTGTGAATGGTATAAGAAAGGTATTGAAGAACTGGAAAAAGGAATAGCTGTTATAG  
 TTACAGGACAAGGTGAACAGTGTAAAGAGCTAGACGCCCTCAAGCTAAAATGATGACTAATTTGGTTAT  
 GGCCAAGGACCGCTTACAACCTTCTAGAAAGTGGAGCTGTCCAAAAAGAAAAGACCCCTTAACACACACT  
 AGTAATCACTGCCTCGTTCAAAAACAGTTATGAAAAGTGGATCTGCAGGCCTTTCAGGCCACCATAGAG  
 CACCTAGTTACAGTGGTTTATCCATGGTTTCTGGAGTGAACAGGGATCTGGTCCTGCTCTACCACTCA  
 TAAGGGTACTCCGAAAACAAATAGGACAAATAAACCTTCTACCCCTACAACCTGCTACTCGTAAGAAAAAA  
 GACTTGAAGAATTTAGGAATGTGGACAGCAACCTTGCTAACCTTATAATGAATGAAATGTGGACAATG  
 GAACAGCTGTTAAATTTGATGATATAGCTGGTCAAGACTTGGCAAAACAAGCATTGCAAGAAATGTTAT  
 TCTTCTTCTCTGAGGCTGAGTTGTTACAGGGCTTAGAGCTCCTGCCAGAGGGCTGTTACTCTTTGGT  
 CCACCTGGGAATGGGAAGACAATGCTGGCTAAAGCAGTAGCTGCAGAATCGAATGCAACCTCTTTAATA  
 TAAGTCTGCAAGTTTAACTTCAAAATACGTGGGAGAAGGAGAGAAATTTGGTGGGGCTCTTTTGGCTGT  
 GGCTCGAAGAACTCAACCTTCTATAATTTTATAGATGAAGTTGATAGCCTTTTGTGTGAAAGAAGAGAA  
 GGGGAGCACGATGCTAGTAGCGCTAAAACTGAATTTCTAATAGAATTTGATGGTGTACAGTCTGCTG  
 GAGATGACAGAGTACTTGAATGGGTGCAACTAATAGGCCACAAGAGCTTATGAGGCTGTTCTCAGGCG  
 TTTTCATCAAACGGGTATATGTGCTTTACCAAATGAGGAGACAAGACTACTTTTGGCTAAAAATCTGTTA  
 TGTAAACAAGGAAGTCCATTGACCCAAAAAGAACTAGCACAACCTGCTAGAATGACTGATGGATACTCAG  
 GAAGTACCTAACAGCTTTGGCAAAGATGCAGCACTGGTCTTATCCGAGAAGTAAAACAGAACAGGT  
 GAAGAATATGTCTGCCAGTGAAGTGAAGAAATTCGATTATCTGACTTCACTGAATCCTTAAAAAATA  
 AAACGCAGCGTACGCCCTCAAACCTTAGAAGCGTACATACGTTGGAACAAGGACTTTGGAGATACCACTG  
 TT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC214100 representing NM\_199436  
 Red=Cloning site Green=Tags(s)

MNSPGRGKKGSGGASNPVPPRPPPPCLAPAPPAAGPAPPPESPHKRNLYYFVGFALLRLVAFH  
 LGLL FVWLQRF SRALMAAKRSSGAAPAPASASAPVPGGEAERVVRFHKQAF EYISIALRIDEDEKAG  
 QKEQAVEWYKKGIEELEKGI AVIVTQGEQCERARRLQAKMMTNLVMAKDRLQLLESGAVPKRKDPLTHT  
 SNSLPRSKTVMKTGSAGLSGHRAPSYGLSMVSGVKQSGPAPTTHKGT PKTNRTNKPSTPTTATRKKK  
 DLKNFRNVDNLANLIMNEIVDNGTAVKFDDIAGQDLAKQALQEIVILPSLRPELFTGLRAPARGLLLFG  
 PPGNGKMLAKAVAAESNATFFNISAA SLTSKYVGEKEKLVRALFAVARELQPSIIFIDEVDSL CERRE  
 GEHDASRRLKTEFLIEFDGVQSAGDDRVLVMGATNRPQELDEAVLRRF IKRVYVSLPNEETRLLLKNLL  
 CKQGSPLTQKELAQ LARMTDGYSGSDLTALAKDAALGP IRELKPEQVKNMSASEMRNIRL SDFTESLKKI  
 KRSVSPQTLEAYIRWNKDFGDTTV

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:**

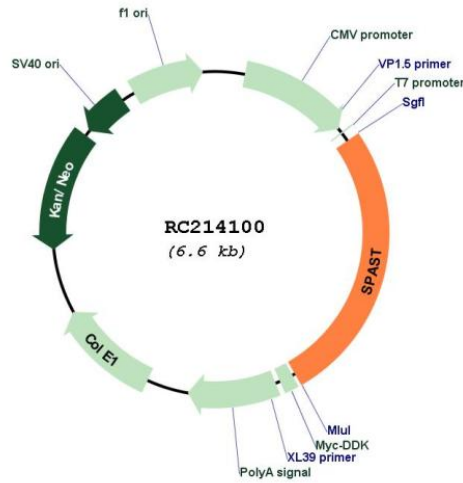
[https://cdn.origene.com/chromatograms/ja1398\\_b08.zip](https://cdn.origene.com/chromatograms/ja1398_b08.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:

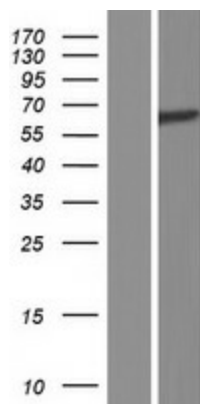


ACCN: NM\_199436

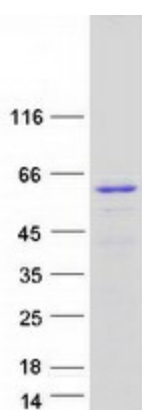
ORF Size: 1752 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_199436.2</a>
<b>RefSeq Size:</b>	5125 bp
<b>RefSeq ORF:</b>	1755 bp
<b>Locus ID:</b>	6683
<b>UniProt ID:</b>	<a href="#">Q9UBP0</a>
<b>Cytogenetics:</b>	2p22.3
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>MW:</b>	63.4 kDa
<b>Gene Summary:</b>	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:



Western blot validation of overexpression lysate (Cat# [LY404560]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214100 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SPAST protein (Cat# [TP314100]). The protein was produced from HEK293T cells transfected with SPAST cDNA clone (Cat# RC214100) using MegaTran 2.0 (Cat# [TT210002]).