

## Product datasheet for **RC225431**

### SPG21 (NM\_001127889) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** SPG21 (NM\_001127889) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** SPG21  
**Synonyms:** ABHD21; ACP33; BM-019; GL010; MAST  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC225431 ORF sequence  
**Red=Cloning site Blue=ORF Green=Tags(s)**

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGAGAGATTAAGTCTCTCCTGATTATAACTGGTTTAGAGGTACAGTCCCTTAAAAAGATTATG  
TGGATGATGATGACAGTAAGATATGGTCGCTCTATGACGCGGGCCCCGAAGTATCAGGTGCCTCTCAT  
ATTCCTGCCCCGTGTCAGTGGAACTGCAGATGTCTTTTCCGGCAGATTTGGCTCTGACTGGATGGGT  
TACCGGTTATCGCTTTCAGTATCCAGTTTATGGGACCATCTCGAGTCTGTGATGGATTAGAAAAC  
TTTTAGACCATTACAATTGGATAAAGTTCATCTTTTGGCGCTCTTTGGGAGGCTTTTGGCCAGAA  
ATTTGCTGAATACACTCACAATCTCCTAGAGTCCATCCCTAATCCTCTGCAATTCCTCAGTGACACC  
TCTATCTCAACCAAACTTGACTGCAAAACAGCTTTTGGCTGATGCCTGCATTTATGCTCAAAAAATAG  
TTCTTGAAAATTTTCATCTGGCCCGGTGGACCCTATGATGGCTGATGCCATTGATTTTCATGGTAGACAG  
GCTAGAAAAGTTTGGGTCAGAGTGAAGTGGCTTCAAGACTTACCTTGAATTGTCAAATTCCTATGTGGAA  
CCTCATAAAATTCGGGACATACCTGTAAGTATTATGGATGTGTTGATCAGAGTGCCTTCAACTGAAG  
CTAAAGAAGAAATGTACAAGCTGTATCCTAATGCCGAAGAGCTCATCTGAAAACAGGAGCAATTTCCC  
ATACCTGTGCAGAAGTGCAGAGGTCAATCTTTATGTACAGATACATTTGCTGCAATTCATGGAACCAA  
TACGCGCCATTGACCCATCAATGGTCAGTGCCGAGGAGCTTGGAGTGCAGAAAGGCAGCCTTGGCATCA  
GCCAGGAGGAGCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC225431 protein sequence  
Red=Cloning site Green=Tags(s)

MGEIKVSPDYNWFRGTVPLKKIIVDDDDSKIWSLYDAGPRSIRCPLIFLPPVSGTADVFFRQILALTGWG  
 YRVIALQYPVYWDHLEFCDFGRKLLDHLQLDKVHLFGASLGGFLAQKFAEYTHKSPRVHSLILCNFSFSDT  
 SIFNQTWTANSFWLMPAFMLKKIIVLGNFSSGPVDPMMADAIDFMVDRLESLGQSELASRLTLNCQNSYVE  
 PHKIRDIPVTIMDVFDQSALSTEAKEEMYKLYPNARRAHLKTGGNFYLCRSAEVNLYVQIHLLQFHGTK  
 YAAIDPSMVSAAEELEVQKGLGISQEEQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6392\\_e02.zip](https://cdn.origene.com/chromatograms/mk6392_e02.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001127889

**ORF Size:** 924 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\\_001127889.5](#)

**RefSeq Size:** 1658 bp

**RefSeq ORF:** 927 bp

**Locus ID:** 51324

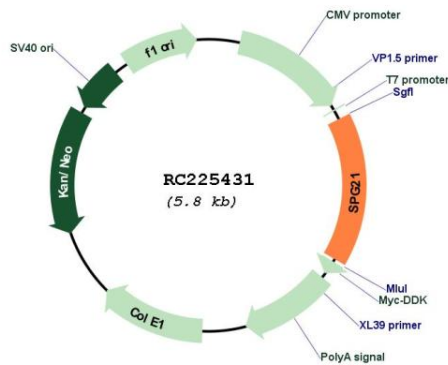
**UniProt ID:** [Q9NZD8](#)

**Cytogenetics:** 15q22.31

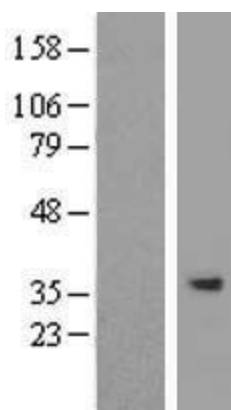
**MW:** 35 kDa

**Gene Summary:** The protein encoded by this gene binds to the hydrophobic C-terminal amino acids of CD4 which are involved in repression of T cell activation. The interaction with CD4 is mediated by the noncatalytic alpha/beta hydrolase fold domain of this protein. It is thus proposed that this gene product modulates the stimulatory activity of CD4. Mutations in this gene are associated with autosomal recessive spastic paraplegia 21 (SPG21), also known as mast syndrome. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2014]

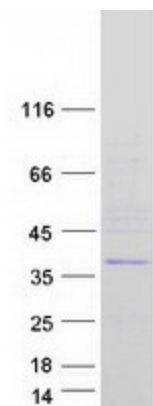
**Product images:**



Circular map for RC225431



Western blot validation of overexpression lysate (Cat# [LY426876]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC225431 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SPG21 protein (Cat# [TP325431]). The protein was produced from HEK293T cells transfected with SPG21 cDNA clone (Cat# RC225431) using MegaTran 2.0 (Cat# [TT210002]).