

## Product datasheet for **RG225949**

### **SPG3A (ATL1) (NM\_001127713) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	SPG3A (ATL1) (NM_001127713) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ATL1
Synonyms:	AD-FSP; atlastin1; FSP1; GBP3; HSN1D; SPG3; SPG3A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG225949 representing NM\_001127713  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCAAGAACCGCAGGGACAGAAACAGTTGGGGTGGATTTTCGGAAAAGACATATGAATGGAGCTCAG  
 AAGAGGAGGAGCCAGTGA AAAAGGCAGGACCAGTCCAAGTCTCATTGTCAAAGATGACCATTCTTTGA  
 GTTAGATGAAACTGCATTA AATCGGATCCTTCTCTCGGAGGCTGTGAGAGACAAGGAGGTTGTTGCTGTA  
 TCTGTTGCTGGAGCATTTAGAAAAGGAAAATCATTCTGATGGACTTCATGTTGAGATACATGTACAACC  
 AGGAATCAGTTGATTGGGTTGGAGACTACAATGAACCATGACTGGTTTTTCATGGAGAGGTGGATCTGA  
 GCGAGAGACCACAGGAATTCAGATATGGAGTGA AATCTTCCTTATCAATAAACCTGATGGTAAAAAGGTT  
 GCAGTGTATTGATGGATACTCAGGGAACCTTTGATAGTCAGTCAACTTTGAGAGATTACGCCACAGTAT  
 TTGCCCTTAGCACAATGATCAGCTCAATACAGGTATATAA CTTATCCCAAAATGTCCAGGAGGATGATCT  
 TCAGCACCTCCAGCTTTTCACTGAGTATGGCAGACTGGCAATGGAGGAAACATTCCTGAAGCCATTTTCAG  
 AGTCTGATATTTCTTGTTCGAGACTGGAGTTTCCCATACGAATTTTCATATGGAGCCGATGGTGGTGCCA  
 AATTTCTGGAAAAACGCCTCAAGGTCTCAGGGAAC CAGCATGAAGAACTACAGAACGTCAGAAAACACAT  
 CCATTCCTGTTTCACCAACATTTCTGTTTTCTGCTACCTCATCTGGCTTAAAAGTAGCTACCAATCCA  
 AACTTTGATGGAAAATTGAAAGAAATAGATGATGAATTCATCAAAAACCTGAAAACTGATTCTCTGGC  
 TACTTAGTCCCGAGAGCCTAGATATTAAGAGATCAATGGGAATAAAATCACCTGCCGGGGTCTGGTGGA  
 GTACTTCAAGGCTTATATAAAGATCTATCAAGGTGAAGAATTACCATCCCAATCCATGTTACAGGCC  
 ACAGCAGAAGCTAACAAATTTAGCAGCCGTGGCAACTGCCAAGGACACATACAACAAAAAATGGAAGAGA  
 TTTGTGGTGGTGACAAACCATTTCTGGCCCCAAATGACTTGCAGACCAACACCTGCAACTTAAGGAAGA  
 ATCTGTGAAGCTATTCGAGGGGTGAAGAAGATGGGTGGGGAAGAATTTAGCCGGCGTTACTGTCAGCAG  
 TTGGAGAGTGA AATAGATGA AACTTTACATCCAATATATCAAGCACAATGATAGCAAAAATATCTTCCATG  
 CAGCTCGTACCCAGCCACACTGTTTGTAGTCATCTTTATCACATATGTGATTGCTGGTGTGACTGGATT  
 CATTGGTTGGACATCATAGCTAGCCTATGCAATATGATAATGGGACTGACCCTTATCACCTGTGCACT  
 TGGGCATATATCCGCTACTCTGGAGAATACCGAGAGCTGGGAGCTGTAATAGACCAGGTGGCTGCAGCTC  
 TGTGGGACCAGGCTTTGTACAAGCTTTACAGTGCAGCAGCAACCCACAGACATCTGTATCATCAAGCTTT  
 CCCTACACCAAAGTCGGAATCTACTGAACAATCAGAAAAGAAAAAATG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG225949 representing NM\_001127713  
 Red=Cloning site Green=Tags(s)

MAKNRRDRNSWGGFSEKTYEWSSEEEEPVKKAGPVQVLIVKDDHSFELDETALNRILLSEAVRDKEVVAV  
 SVAGAFRKGSFLMDFMLRYMYNQESVDWVGDYNEPLTGF SWRGGSERETTGIQIWISEIFL INKPDGKKV  
 AVLLMDTQGTFDQSSTLRDSATVFALSTMISSIQVYNLSQNVQEDDLQHLQLFTEYGR LAMEETFLKPFQ  
 SLIFLVRDWSFPYEF SYGADGGAKFLEKRLKVSQNQHEELQNVKRKHIHSCFTNISCFLLPHPLK VATNP  
 NFDGKLKEIDDEFIKNLKILIPWLLSPESLDIKEINGNKITCRGLVEYFKAYIKIYQGEELPHPKSMLQA  
 TAEANNLA AVATAKDTYNKMEEICGGDKPFLAPNDLQTKHLQLKEESVKLFRGVKMMGGEEFSRRYLQQ  
 LESEIDELYIQYIKHNSKNI FHAARTPATLFVVIFITYYIAGVTGFIGLDIIASL CNMIMGLTLITLCT  
 WAYIRYSGEYRELGAVIDQVAALWDQALYKLYSAAATHRHL YHQAFPTPKSESTEQSEKMKM

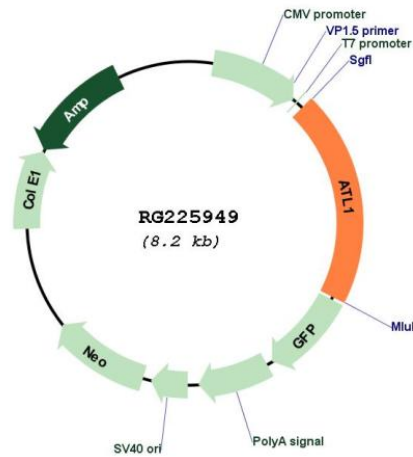
**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:


**Plasmid Map:**


<b>ACCN:</b>	NM_001127713
<b>ORF Size:</b>	1659 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_001127713.1</a> , <a href="#">NP_001121185.1</a>
<b>RefSeq Size:</b>	2821 bp
<b>RefSeq ORF:</b>	1662 bp
<b>Locus ID:</b>	51062
<b>UniProt ID:</b>	<a href="#">Q8WXF7</a>
<b>Cytogenetics:</b>	14q22.1
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Gene Summary:</b>	The protein encoded by this gene is a GTPase and a Golgi body transmembrane protein. The encoded protein can form a homotetramer and has been shown to interact with spastin and with mitogen-activated protein kinase kinase kinase 4. This protein may be involved in axonal maintenance as evidenced by the fact that defects in this gene are a cause of spastic paraplegia type 3. Three transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]