

## Product datasheet for **RG214527**

### KIF1A (NM\_004321) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** KIF1A (NM\_004321) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** KIF1A  
**Synonyms:** ATSV; C2orf20; HSN2C; MRD9; NESCAVS; SPG30; UNC104  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG214527 representing NM\_004321  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGGATCGCC

ATGGCCGGGGCTTCGGTGAAGGTGGCGGTGCGGGTCCGCCCTTCAATCCCGGGAATGAGCCGTGACT  
 CCAAGTGCATCATTAGATGTCTGGAAGCACCACCATTGTTAACCCCAAACAGCCCAAGGAGACGCC  
 CAAAAGCTTCAGCTTTGACTACTCCTACTGGTCGCACACCTCACCTGAGGACATCAACTACGCGTCGCAG  
 AAGCAGGTGTACCGGACATCGGCGAGGAGATGCTGCAGCATGCCTTTGAGGGATACAACGTGTGCATCT  
 TCGCCTATGGGCAGACGGGTGCCGCAAGTCTACACCATGATGGCAAGCAGGAGAAGGACCAGCAGGG  
 CATCATCCACAGCTCTGCGAGGACCTTCTCTCGGATCAACGACACGACCAACGACAACATGTCTAC  
 TCCGTGGAGGTACGCTACATGGAGATTTACTGTGAGCGCGTCCGTGACCTCCTGAACCCCAAGAACAAGG  
 GCAACCTTCGCGTGAGGGAGCACCCACTGCTGGGGCCCTACGTGGAGGACCTCTCCAAGCTGGCTGTAC  
 CTCCTACAATGACATCCAGGACCTCATGGACTCAGGGAACAAGGCCAGGACCGTGGCGGCCCAACATG  
 AATGAGACCAGCAGTCGCTCCCACGCCGTCTTCAACATCATCTTCACCCAGAAGCGCCATGACGCAGAGA  
 CCAATATACCACGGAGAAGGTGAGCAAATCAGCCTGGTGGACCTGGCTGGGAGCGAGCGGGCTGACTC  
 CACGGGAGCCAAGGGCACGCGCCTCAAGGAGGGGGCCAACATCAACAAGTCGCTGACCACCCTGGGCAAG  
 GTCATCTCCGCCCTGGCTGAAATGGACTCCGGACCCAACAAGAACAAGAAAAGAAGAAGACAGATTTCA  
 TTCCGTACCGAGATTCGTTGACCTGGCTCCTCCGGGAAAACCTGGCGGTAACCTCAAGGACAGCTAT  
 GGTGGCAGCCTTGAGTCTGCAGACATCAACTACGATGAGACCCTTAGCACGCTGAGGTATGCTGACCGG  
 GCCAAGCAGATCCGCTGCAATGTGTCAATGAGGACCCCAACAACAAGCTGATCCGCGAGCTGAAGG  
 ATGAGGTGACCCGGCTGCGGGACCTTCTGTACGCCAGGGTCTTGGCGACATCACTGACATGACCAATGC  
 CCTGGTGGGTATGAGCCCTCATCTCGCTCTCAGCCCTGTCCAGCCGCGCGGCCCTCGTGTCCAGCCTC  
 CACGAGCGCATCTGTTTGCCCCGGGCAGCGAGGAGGCCATTGAAAGACTGAAGGAAACAGAGAAGATCA  
 TAGCTGAGCTCAATGAGACCTGGGAGGAGAAGCTGCGGCGGACAGAAGCCATCCGGATGGAGAGGGAAGC  
 CCTGCTGGCCGAGATGGGTGTGGCCATGAGGGAGGATGGCGGCACCTTGGCGTATTCTCTCCAAAAAG



[View online »](#)

ACACCACACCTCGTCAACCTGAACGAGGACCCGCTGATGTCTGAGTGCCTGCTCTACTACATCAAGGATG  
 GGATCACCAGAGTGGGCAGGGAGGATGGCGAGAGGCGGCAGGACATTGTTCTGAGTGGGCACTTCATCAA  
 GGAGGAGCACTGCGTCTTCCGGAGCGACTCCAGGGGAGGCAGCGAAGCTGTGGTACCTTGGAGCCCTGT  
 GAGGGGGCAGACACCTACGTCAATGGCAAGAAAGTACAGAGCCCAGCATCTCGGTTTCCAGGAAACCGCA  
 TCATCATGGGTAAGAGCCATGTGTTCCGGTTCAACCACCCGAGCAGGCCCGGCAGGAGCGTGAGCGCAC  
 GCCTTGTGCGGAGACGCCAGCTGAGCCTGTGGACTGGGCTTCGCCAGCGTGAGCTGCTGGAGAAGCAG  
 GGATCGACATGAAGCAGGAGATGGAGCAGAGGCTCCAGGAACTGGAGGACCAGTACCCCGCGAGCGGG  
 AGGAGGCCACCTACCTGCTGGAGCAGCAGCGGCTGGACTATGAGAGCAAGCTGGAGGCTTGCAGAAGCA  
 GATGGACTCCAGTACTACCCGGAGGTGAACGAGGAGGAGGAGGAGGCCGAGGATGAAGTCCAGTGGACA  
 GAGCGGGAGTGTGAGCTGGCGCTCTGGGCTTCCGGAAGTGAAGTGGTACCAGTTCACGCTCTGCGGG  
 ACCTGCTGTGGGGCAACGCCATCTTCTCAAGGAGGCAATGCCATCAGCGTGGAGCTGAAAAAGAAGT  
 ACAATTCCAGTTTGTCTCTGACGGACACTTACTCCCTCTGCCACCCGACTGCTGCCCCAGAG  
 GCCGCAAAGACCAGAGACGCGGCCCTCCCCCGACCATTGTGGCCGTGGAGTCCAGGACCAGAAGA  
 ACGGGGCCACCCACTACTGGACGCTGGAGAAGCTCAGGCAGCGTCTGGACCTGATGCGGGAGATGTACGA  
 CCGCGCTGCAGAGGTGCCCTCCAGTGTATCGAGGACTGTGACAACTGGTGACCGCGGAGACCCCTTC  
 TATGACCCTTCCCTGTTCCGGCTGGTGGGCAGGGCTTCGTGTACCTGAGCAACCTGCTGTACCCCG  
 TCCCCCTGGTACACCGTGTGGCAATCGTCAGCGAGAAGGGCGAGGTGAAGGGCTTCTCCGCGTGGCCGT  
 CCAGGCCATCTCAGCCGATGAAGAGGCCCTGATTATGGCTCTGGCGTCCGCCAGTCCGGAAGTGTAA  
 ATCTCCTTTGATGACCAGCATTTGAAAAGTCCAGTCCGAGTCTTGCCCGTGGTGGGGATGTCCCGCT  
 CGGGAACCTCCAGGAAGAGCTTCGCATCGTGGAGGGCCAGGGCCAGGGTGCAGAGCTGGGGCCCTCAGC  
 CGATGAAGTCAACAACAACCTGTTGACGAGTCCCCCAGAAGGCCCTCCTAGACAGCTCTGAGAAA  
 GCCGCCCTGGATGGGCCCTGGATGCTGCCCTGGACCCTCCGCTGGGCAACACCTTCCACTTCCGTG  
 TGACACTCTGCAGGCGTCCAGCATCTCTGCCGAATATGCCGACATCTTCTGCCAGTTCAACTTCCATCCA  
 CCGCCACGACGAGGCCCTTCTCCACAGAGCCCTGAAGAACAACAGGAGAGGCCCCCACTTGGCTTCTAC  
 CAGTCCAGAACATCGCAGTGGAGGTGACCAAGTCCCTTATTGAGTACATCAAGGCCAGCCATTGTTT  
 TCGAGGCTTTGGCCACTACCAGCAGCACCCGTTCCCGCCCTCTGCAAGGACGTGCTCAGCCCCCTGAG  
 GCCCTCGCGCCGCACTTCCCTCGGGTATGCCACTGTCCAAGCCAGTCCCGCCACCAAGCTCAGCACA  
 CTGACGCGGCCCTGTCCGGGACCCTGCCACTGCAAGTACGACCTGCTGGTCTACTTCGAGATCTGTGAGC  
 TGGAGGCCAACGGCGATTACATCCCGGCCGTGGTGGACCACCGTGGGGGCATGCCATGCATGGGGACCTT  
 CCTCTCCACCAGGGCATCCAGCGACGGATTACGGTACACTACTGCATGAGACAGGCAGCCATATCCGC  
 TGAAGGAAGTGGCGGAGCTGGTCTGGGCCGATCCGAAACACTCCAGAGACCAGGAGTCCCTGATCG  
 ACCCCAACATCTGTCTCTCAACATCTCTCTTCCGGATACATCCACCCAGCCAAAGATGACCGGACCTT  
 TTACCAATTTGAGGCTGCGTGGGACAGCTCCATGCACAACCTCTCTCTGCTGAACCGGGTCAACCCCTAT  
 CGAGAGAAAATCTACATGACACTCTCCGCTTATATCGAGATGGAGAACTGCACCCAGCCGGCTGTTGTCA  
 CCAAGGACTTCTGCATGGTCTTCTATTCCCGTATGCCAAGTGCAGCCCTCGCGCTCCATCCGCAACCT  
 CTTTGGCAGTGGGAGCCTTCCGGCTCAGAGAGTAACCGTGTGACTGGTGTGTACGAGCTCAGCCTGTGC  
 CACGTGGTGTACGCGGGCAGCCAGGGATGCAGCGCCGGCGCGACGAGTCTGGACACATCTGTGGCCT  
 ATGTCCGGGGCAGGAGAACCTGGCAGGCTGGAGGCCCGGAGTACAGTCTCATTCTGGACCACAGTG  
 GGAGCTGGAGAAGCTGAGCCTCCTGCAGGAGTGGAGAAGACTAGGCACTACCTGCTCCTGCGGGAGAAG  
 CTGGAGACCGCCAGCGGCTGTCCCGGAGGCACTGTCCCGGCCCTTACGCGAGGACTCTGAGTCCCATG  
 GCTCCTCCAGCGCTCCTCCCCGCTCTCGGCTGAGGGCCGCCATCACCCCTGGAGGCTCCCAACGAGAG  
 GCAGCGGGAGCTGGCCGTCAGTGTGCGCTGCTCACGCACACATTCAACAGAGAGTACACACACAGC  
 CACGTCTGCGTCAGTGCCAGGAGAGCAAGCTCTCCGAGATGTCTGTACCCTGCTCCGGGACCCGTCGA  
 TGTCCCCTCTAGGGGTGGCCACTCTACCCCTCTCCACTTGCCCTCTCTGGTGAAGGGCGGTACGG  
 TGCCACTGACCTGAGGACCCCGAGCCCTGCTCCCGCCAGCCAGCCAGAGCCCGAGCTGCTGCCAGAG  
 GCCGACTCCAAGAAGCTCCCTTCCCTGCCGGGCAACAGAGACAGACAAGGAGCCCGAGCGCTGCTGG  
 TCCCTGACATCCAGGAGATCCGAGTCCAGCCGATCGTTTCCAAGAAGGGTACCTGCACTTCTGGAGCC  
 GCACACGTGAGGCTGGGCCAGGCCTTCGTGGTGGTGGCGGCCCTATGCCTACATGTACAACAGCGAC  
 AAGGACACCGTGGAGCGGTTCTGTCTAACCTGGCCACTGCCAGGTGGAGTACAGTGGAGACCAGCAGG  
 CTATGCTCAAGACACCCAACACATTCGCGGTGTGCACGGAACACCGCGGCATCTGCTGCAGGCCCGAG  
 CGACAAGGACATGCATGACTGGCTGTACGCCTTCAACCCCTCTGGCCGGGACCATACGGTCCAAGCTC  
 TCCAGAAGGAGTCTGCCAGATGCGGGTC

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG214527 representing NM\_004321  
 Red=Cloning site Green=Tags(s)

MAGASVKVAVRVRPFNSREMSRDSKCI IQMSGSTTTIVNPKQPKETPKSFSFDYSYWSHTSPEDINYASQ  
 KQVYRDI GEEMLQHAFEGYNVICFAYGQTGAGKSYTMMGKQEKDQGGIIPQLCEDLFSRINDTTNDNMSY  
 SVEVSYMEIYCERVRDLLNPKNGNLRVREHLLGPYVEDLSKLAVTSYNDIQDLMDSGNKARTVAATNM  
 NETSSRSHAVFNII FTQKRHDAETNITTEKYSKISLVDLAGSERADSTGAKGTRLKEGANINKSLTTLGK  
 VISALAE MDSGPNKNNKKKKTDFIPYRDSVL TWLLREN LGNSRTAMVAALSPADINYDETLSTLR YADR  
 AKQIRCN AVINEDPNKLI RELKDEVTRLRDL L YAQGLDITDMTNA L VMSPSSSL SALSSRAASVSSL  
 HERILFAPGSEEAIERLKETEKI I AELNETWEEKLR RTEAIRMEREALLAEMGVAMREDGGTLGVFSPKK  
 TPHLVNLNEDPLMSECLLYIKDGITRVGREDGERRQDIVLSGHF IKEEHCVFRSDSRGGSEAVVTLEPC  
 EGADTYVNGKVTPE SILRSGNRIIMGKSHVFRFNHPEQARQERERTPCAETPAEPVDWAF AQRELLEKQ  
 GIDMKQEMEQRLQELDQYRRERE EATYLL EQRLDYESKLEALQKQMDSRYPVEVNEEEEEPEDEVQWT  
 ERECELALWAFRWKWKYQFTSLRDLLWGN AIFLKEANAISVELKKK VQFVLLTDTLYSPLPPDLLPPE  
 AAKDRETRPFPRTIVAVEVQDQKNGATHYWTLEKLRQRLDLMREMYDRAAEVPSVIEDCDNVVTGGDPF  
 YDRFPWFRLVGRAFYVLSNLLYPVPLVHRVAIVSEKGEVKGFLRVAVQAI SADEEAPDYGSGVRQSGTAK  
 ISFDDQHFEKQSESCPVVGMRSRSGTSQEELRIVEGQGGADVGPSADEVNNNTCSAVPPEGLLLDSSEK  
 AALDGPLDAALDHLRLGNTFTFRVTVLQASSISAEYADIFCQFNFIHRHDEAFSTEPLKNTGRGPPLGFY  
 HVQNI AVEVTKSFI EYIKSQPIVFEVFGHYQQHPFPLCKDVL SPLRPSRRHFPRVMPLSKPV PATKLS  
 LTRPCPGPCHCKYDLLVYFEICELEANGDYIPAVVDHRGMPMCGTFL LHQGIQRRTIVTLLHETGSHIR  
 WKEVREL VVGRIRNTPETDESLIDPNILSLNILSSGYIHPAQDDRTFYQFEAAWSSMHNSLLLRNVTPY  
 REKIYMTLSAYIEMENCTQPAVVTKDFCMVFYSRDAKL PASRSIRNLFSGSLRASESNRVTVGYELSLC  
 HVADAGSPGMQRRRRRLDTSVA YVRGEENLAGWRPRSDSLILDHQWELEKLSLLQVEKTRHYLLLRK  
 LETAQRVPVEALSPA FSEDES HSGSSASSPLSAEGRPSLEAPNERQRELAVKCLRLLTHTFNREYTHS  
 HVCVSA SESKLS EMSVTL LRDPMSPLGVATLTPSSTCPSLVEGRYGATDLRTPQPCSRPASPEPELLPE  
 ADSKKL P SPARATETDK EPQRLLPDIQEIRVSPIVSKKGYLHFLEPHTSGWARRFVVVRRPYAYMYNSD  
 KDTVERFVNLNLATAQVEYSEDQQAMLKTPNTFAVCTEHRGILLQAASDKMDHDLWYAFNPLLAGTIRSKL  
 SRRRSAQMRV

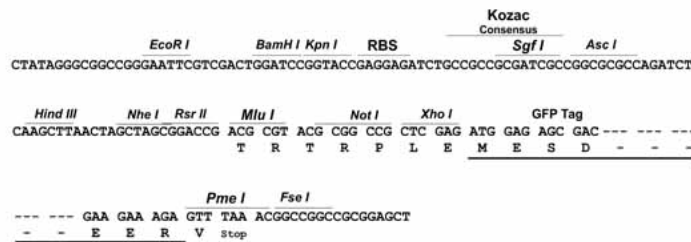
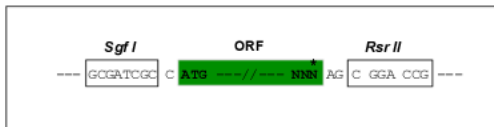
SGPTRRRLE - GFP Tag - V

**Restriction Sites:**

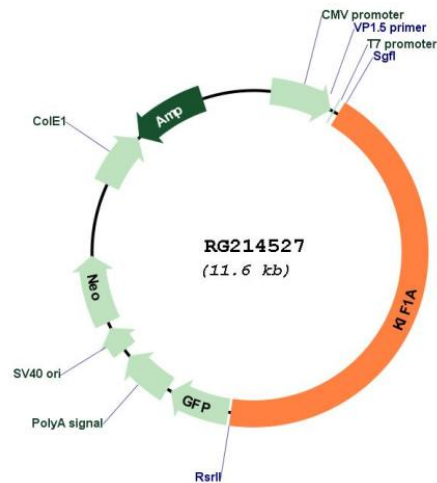
SgfI-RsrII

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



## Plasmid Map:



ACCN: NM\_004321

ORF Size: 5070 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.

<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_004321.8</a>
<b>RefSeq Size:</b>	8843 bp
<b>RefSeq ORF:</b>	5073 bp
<b>Locus ID:</b>	547
<b>UniProt ID:</b>	<a href="#">Q12756</a>
<b>Cytogenetics:</b>	2q37.3
<b>Domains:</b>	FHA, kinesin, PH
<b>Protein Families:</b>	Druggable Genome
<b>Gene Summary:</b>	The protein encoded by this gene is a member of the kinesin family and functions as an anterograde motor protein that transports membranous organelles along axonal microtubules. Mutations at this locus have been associated with spastic paraplegia-30 and hereditary sensory neuropathy IIC. Alternatively spliced transcript variants encoding distinct isoforms have been described. [provided by RefSeq, Apr 2012]