

## Product datasheet for **RG235324**

### **KIF21B (NM\_001252100) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	KIF21B (NM_001252100) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	KIF21B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG235324 representing NM_001252100 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGATCGCC**

ATGGCCGGCCAGGGGGACTGCTGCGTCAAGGTGGCCGTCAAGATCCGGCCCCAGCTGTGCAAGGAGAAGA  
TTGAGGGCTGTCACATCTGTACCTCTGTTACCCCGGGAGAGCCCCAGGTCTGCTGGGGAAGGACAAGGC  
CTTCACCTATGACTTTGTCTTCGACCTGGACACCTGGCAAGAACAGATCTATTCCACCTGTGTGAGCAAG  
CTCATCGAGGGCTGCTTCGAGGGCTATAATGCCACGGTGTGCGCTATGGGCAGACGGGGCCGGGAAGA  
CGTACACCATGGGCACTGGCTTTGACATGGCAACGTCCGAGGAGGAGCAGGGCATCATCCCGAGGGCCAT  
CGCACACCTCTTTGGGGCATTGCCGAGCGCAAGCGCCGGGCACAGGAGCAGGGCGTGGCTGGACCTGAG  
TTCAAAGTCAGCGCCAGTTTCTGGAGCTCTACAACGAGGAGATCCTTGACCTGTTTGACAGCACCCGTG  
ACCCTGACACCCGCCACCGCAGGTCCAACATCAAGATCCACGAGGACGCAACCGTGGCATCTACACCAC  
TGGCGTCACTTCTCGCCTCATCCACTCCCAGGAGGAGCTGATCCAGTGCCTGAAGCAGGGGGCCCTGTCC  
CGCACCACAGCCAGCACCCAGATGAACGTGCAGAGCTCACGCTCCACGCCATCTTACCATCCACCTGT  
GCCAGATGCGCATGTGCACCCAGCCGACCTGGTGAATGAGGCGGTGACTGGGCTTCTGATGGTACACC  
TCCCTCGAGTGAGTATGAGACACTACTGCTAAGTTTCACTTTGTGGACCTGGCCGGCTCAGAGCGGCTG  
AAGCGGACAGGGGCTACTGGCGAGCGGGCAAGGAGGGCATCTCCATCAACTGTGGCCTGCTGGCCTTGG  
GCAATGTGATCAGCGCCTTAGGGGACCAGAGCAAGAAGGTGGTGCACGTTCCCTACAGGGACTCCAAGCT  
CACTCGGCTCCTCCAGGATTCGCTGGGGGGCAACAGCCAGACCATCATGATCGCCTGTGTGAGCCCTCA  
GACCGAGATTTTATGGAGACCCTCAACACACTCAAATATGCCAATCGGGCCCCGAACATCAAGAACAAGG  
TGGTAGTGAACCAGGACAAGACCAGCCAGCAAATCAGTGCCTGCGGGCTGAGATTGCTCGGCTGCAGAT  
GGAGCTGATGGAGTAAAGGCGGGCAAGCGAGTATAGGAGAGGATGGCGCTGAGGGCTATAGTGATCTG  
TTCGAGAGAATGCCATGCTACAGAAGGAGAATGGGGCCCTGCGGCTGCGGGTGAAGCCATGCAGGAGG  
CCATCGATGCCATCAACAACCGGTCAACAGCTCATGAGCCAGGAGGCAACCTGCTGTAGCCAAAGGC  
CGGCGATGGCAATGAGGCCATTGGTGCCTGATCCAGAACTACATCCGGGAGATCGAGGACTACGGACT  
AAGCTTCTAGAGAGTGAAGCCATGAACGAGTCCCTGCGCCGACGCTCTACGGGCTCGGCTAGGAGCC  
CCTACTCCCTGGGTGCTTCTCCAGCCGCCCGGCTTCCGGGGCAGCCCTGCCAGCTCCATGGAGGATGC



CTCGGAGGTGATCCGCAGGGCCAAGCAGGACCTGGAGCGGCTAAAGAAGAAGGAGGTCAGGCAGCGGAGG  
AAGAGCCCCGAGAAGGAAGCCTTCAAAAAGAGGGCAAACTCCAACAGGAGAACAGCGAGGAGACGGATG  
AGAACGAGGCGGAGGAGGAGGAGGAAGAGCGAGACGAGAGTGGCTGTGAGGAGGAGGAAGGGCGCGAGGA  
TGAAGATGAGGACTCGGGCAGTGAAGAGAGCCTGGTGGACTCAGACTCAGACCCCGAGGAGAAGGAGGTG  
AACTTCCAGGCGGACCTGGCCGACCTGACTTGTGAGATCGAAATCAAGCAGAAGCTGATCGACGAGCTGG  
AGAACGCCAGCGGGGTTGCAGACGCTCAAGCACCAGTATGAGGAAAAGCTGATTCTGCTGCAGAACAA  
GATCCGAGACACACAGCTGGAGCGGACCGTGTGCTGCAGAACCCTCAGCACCATGGAGTGCATATACTGAG  
GAGAAGGCCAACAGATCAAGGCAGACTATGAGAAGAGGCTGCGGGAGATGAACCGGGACCTGCAGAAGC  
TGACGGCCGCCAGAAAAGACACGCCCGCTGCTTAAGAACCAGTCGCGCTACGAGAGGGAGCTGAAGAA  
GCTACAGGCCGAGGTGGCTGAGATGAAGAAGGCCAAGGTGGCCCTGATGAAGCAGATGCGTGAGGAGCAA  
CAGCGGCGGCGGCTAGTGGAGACCAAGAGGAACCGGGAGATCGCACAGCTCAAGAAGGAGCAGCGGCGAC  
AGGAGTTTCAGATCCGAGCTCTGGAGTCCAGAAGCGGCAGCAGGAGATGGTCTGAGGAGGAAGACCCA  
GGAGTTTCTGCACTGAGGCGCCTGGCCAAGCCATGTCTGAGCGGGTGGCAGGGCGTGCAGGACTAAAG  
CCACCCATGCTGGACTCTGGGGTGAAGGTGTCGCCAGCACTACCTCATCTGAGGCTGAATCAGGGGCC  
GCTCTGTCTCCAGCATCGTGCAGCAGTGAACCGCAAAATCAACCACTTCTTGGGGGACCATCTGCGCC  
CACTGTCAATGGACCCCTGCTGCCGAAAAGAAGTCCAGAAGAAGGGGGCCAGCCAGAGCTTCAGTAAAG  
GCGGAAGGCTCAAGTGGCAGTCCCTGGAGCGACGGATCATTGACATCGTCATGCAGAGAATGACCATTTG  
TCAACCTGGAGGCTGACATGGAGCGGCTCATCAAGAAAAGGGAGGAGCTGTTCTCTGCAAGGAGGCACT  
GCGGAGGAAGCGGGAGCGGCTGCAGGCTGAGAGCCCCGAGGAAGAGAAGGGGCTGCAGGAGCTGGCTGAG  
GAGATCGAGGTGCTGGCAGCCAACATTGACTACATCAATGACGGCATCACCGACTGCCAGGCCACCATCG  
TGCAGCTGGAGGAGACCAAGGAGGAGCTGGACTCCACAGACACATCCGTGGTCAACAGCTCTGCTCCCT  
GGCTGAAGCCCGCTCCTGCTAGACAACCTCCTCAAGGCATCCATTGACAAGGGGCTGCAAGTCCAGACAA  
AAGAGGCCAGATCCGGCTGTTGGAGGGCCGACTGAGGCACGGATATGGCAGGCTCTCCAGAAC  
ATCTGCTCCTGGACGCCCTGCGTGAGAAGGCTGAAGCTCACCCGAGCTGCAGGCCCTCATCTACAATGT  
GCAGCAGGAGAATGGCTACGCCAGCACAGATGAGGAGATCTCAGAGTTCTCTGAGGGCAGCTTCTCCAG  
TCATTCACCATGAAAGGCTCCACCAGCCATGACGATTTCAAGTTCAAGAGCGAGCCCAAAGTGTCTGCC  
AAATGAAAGCTGTGTCGGCTGAGTGCCTGGGCCCCCACTGGATATCTCCACCAAGAACATCACCAAGTC  
CCTGGCTCCCTCGTTGAGATCAAAGAGGACGGAGTGGGCTTCTCTGTCCGAGACCCCTATTACCGGGAC  
AGGGTCTCGCGCACCGTCACTGCTACCCGGGGCAGCACTTCCCTAGGCAATCTCGAGCCACAGAGA  
CGTCCCCGCTGACGAGAAGGAAGTCTACGACCGAGGGCAGCCATTAGGTCCACAGATGTGGGATTCAC  
ACCCCCATCATCCCTCCCACTCGGCCCGCAATGACCGCAATGTCTTCTCTGCTCACCAGTAATCAG  
AGCCAGGGGTGACGCGTGGACAAGTCTGATGACAGCGACTCCTCTTTGTGCGGAGGCTCCTGAGGGGCATCA  
TCTCCCCGGTTGGAGGAGCCAAGGGTGCACGGACGGCCCCACTGCAGTGTGTCTCCATGGCCGAAGGCCA  
CACCAAGCCATCCTCTGCCTGGATGCCACAGATGAGTTGCTATTCACAGGGTCCAAAGACCCGAAGCTGC  
AAGATGTGGAAGTGGTTACGGGACAGGAGATCGCAGCTCTAAAGGGCCACCCCAACAACGTGGTCTCCA  
TCAAGTACTGCAGCCACTCGGGGCTTGTGTTCTCCGTGTCCACCTCCTACATCAAGGTGTGGGACATCCG  
GGACTCAGCCAAGTGCATTCCGACTCTCACGTCTCGGGCCAGGTGATCTCAGGGGATGCCTGTGCCGCC  
ACATCCACCCGTGCCATCACAGTGTCTCAGGGCAGCATCAGATCAACCAGATCGCCCTCAGCCCTTCGG  
GCACCATGCTGTACGCCCTCGGGCAATGCCGTCCGCATCTGGGAGCTTAGCAGGTTCCAGCCTGTCCG  
CAAGTACTGGCCACATCGGCCCTGTGATGTGCCTGACGGTCAACCAGACGGCCAGCCAGCATGACCTC  
GTGGTACTGGCTCCAAGGACCACTACGTTAAGATGTTTCGAGCTGGGCGAGTGTGTGACGGGACCATCG  
GCCCCACTCACAACCTCGAGCCCCGCACTACGATGGCATCGAGTGTCTCGCCATCCAGGGAGACATCCT  
GTTCAAGTGGTCCCGAGATAACGGCATCAAGAAGTGGGACCTAGACCAGCAGGAGCTCATCCAGCAAATC  
CCCAATGCGCACAAAGGACTGGGTGTGCGCCCTGGCCTTCCATCCCGGGCCGCCCATGCTGCTCAGCGCT  
GCCGTGCGGGTGTATCAAGGTCTGGAACGTGGACAACCTCACACCCATCGGTGAGATCAAGGGCCACGA  
CAGTCCCATCAATGCCATCTGCACCAATGCCAAGCATATCTTACAGCCTCCAGTACTGCCGGTAAAG  
TTGTGGAATTACGTCCCTGGACTCACCCCTGCCTTCTCGCCGAGTCTGGCCATAAAGGGCCGCGCCA  
CCACCCTGCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG235324 representing NM\_001252100  
 Red=Cloning site Green=Tags(s)

MAGQGDCCKVAVRIRPQLSKEKIEGCHICTSVTPGEPQVLLGKDKAFTYDFVFDLDTWQEQIYSTCVSK  
 LIEGCFEGYNATVLAYGQTGAGKTYTMTGTFDMATSEEEQGIIPRAIAHLFGGIAERKRRAEQGVAGPE  
 FKVSAQFLELYNEEILDLDSTRDPDTRHRRSNIKIHDANGGIYTTGVT SRLIHSQEELIQCLKQGALS  
 RTTASTQMNQSSSRSHAI FTIHLQCMRMCTQPDLYNEAVTGLPDGTPPSSEYETL TAKFHFDLAGSERL  
 KRTGATGERAKEGISINCGLLALGNVISALGDQSKKVVHVPYRDSKL TRLLQDSLGGNSQTIMIACVSPS  
 DRDFMETLNTLKYANRARNIKNKVVVNQDKTSQQISALRAE IARLQMELEMEYKAGKRVIGEDGAEGYSDL  
 FRENAMLQKENGALRLRVKAMQEAIDA INNRTVQLMSQEANLLAKAGDGNEAIGALI QNYIREIEELRT  
 KLL ESEAMNESLRRSLSRASARSPYSLGASPAAPAFGGSPASSMEDASEVIRRAKQDLERLKKKEVRQRR  
 KSPEKEAFKKRAKLQQENSEETDENE AEEEEERDESGCEEEEGREDEDEDSGSEESLVSDSDPEEKEV  
 NFQADLADLTCEIEIKQKLIDELNSQRRLQTLKHQYEEKLILLQNKIRD TQLERDRVLQNLSTMECYTE  
 EKANKIKADYEKRLREMNRLQKLQAAQKEHARLLKNQSRYERELKKLQAEVAEMKKAKVALMKQMRREEQ  
 QRRRLVETKRNREIAQLKKEQRRQEFQIRALE SQKRQQEMVLRRTQEV SALRRLAKPMSERVAGRAGLK  
 PMLDSGAEVSATTSSEAESGARSVSSIVRQWNRKINHFLGDHPAPT VNGTRPARKKFKQKKGASQSF SK  
 AARLKWQSLERRIIDIVMQRMTIVNLEADMERLIKREELFLLQEALRRKRERLQAESPEEEKGLQELAE  
 EIEVLAANIDYINDGITDCQATIVQLEETKEELDSTDTSVVSSCSLAEARLLLDNFLKASIDKGLQVAQ  
 KEAQIRLLEGRRLRQTDMA GSSQNHL LLDALREKAE AHPELQALIYNVQQENGYASTDEEISEFSEGSFSQ  
 SFTMKGSTSHDDFKFKSEPKLSAQMKAVSAECLGPPLDISTKNITKSLASLVEIKEDGVGFSVRDPYYRD  
 RVSRTVSLPTRGSTFPRQSRATE SPTL TRRKS YDRGQPIRSTDVGF TPPSPPTPRPRNDRNVF SRLTSNQ  
 SQGSALDKSDDSDSSLSEVL RGIISPVGGA KGARTAPLQCVSMAEGHTKPI LCLDATDELLFTGSKDRSC  
 KMWNLV TQGEIAALKGHPNNVVS IKYCSHSGLVFSVSTSYIKVWDIRDSAKCIRTLTSSGQV ISGDACAA  
 TSTRAITSAQGEHQINQIALSPSGTMLY AASGN AVRIWELSRFPVPGKLTGHIGPV MCLTVTQTASQHDL  
 VVTGSKDHYVKMFELGECVTGTIGPTHNFEPHYD GIECLA IQGDILFSGSRDNGIKKWLDQQELIQQI  
 PNAHKDWV CALAFIPGRPMLLSACRAGV IKVWNVNFTP IGEIKGHDSPINAICTNAKHIFTASSDCRVK  
 LWNVYVGLTPCLPRRVLAIKGRATTL P

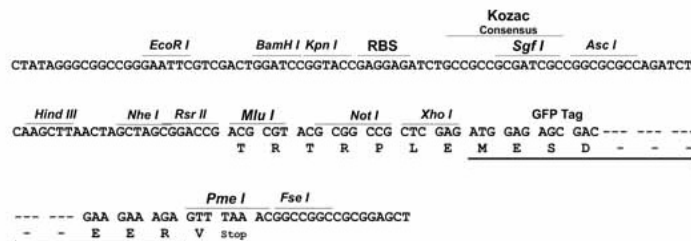
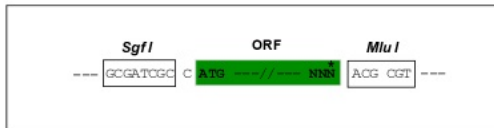
TRTRPLE - GFP Tag - V

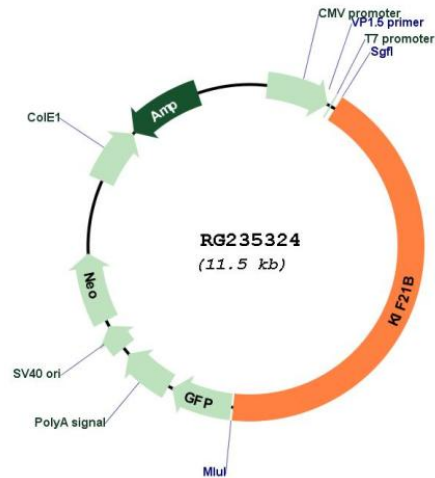
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**Plasmid Map:**


**ACCN:** NM\_001252100

**ORF Size:** 4911 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\\_001252100.2](#)

**RefSeq Size:** 9955 bp

RefSeq ORF: 4914 bp

Locus ID: 23046

UniProt ID: [O75037](#)

Cytogenetics: 1q32.1

Protein Families: Druggable Genome

**Gene Summary:** This gene encodes a member of the kinesin superfamily. Kinesins are ATP-dependent microtubule-based motor proteins that are involved in the intracellular transport of membranous organelles. Single nucleotide polymorphisms in this gene are associated with inflammatory bowel disease and multiple sclerosis. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Nov 2011]