

## Product datasheet for **SC117316**

### **KIF5B (NM\_004521) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	KIF5B (NM_004521) Human Untagged Clone
Tag:	Tag Free
Symbol:	KIF5B
Synonyms:	HEL-S-61; KINH; KNS; KNS1; UKHC
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL6</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_004521, the custom clone sequence may differ by one or more nucleotides

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ATGGCGGACCTGGCCGAGTGCAACATCAAAGTGATGTGTCGCTTCAGACCTCTCAACGAGTCTGAAGTGA
ACCGCGGCGACAAGTACATCGCCAAGTTTCAGGGAGAAGACACGGTCGTGATCGCGTCCAAGCCTTATGC
ATTTGATCGGGTGTCCAGTCAAGCACATCTCAAGAGCAAGTGTATAATGACTGTGCAAAGAAGATTGTT
AAAGATGTAAGGATATAATGGAACAATATTTGCATATGGACAAACATCCTCTGGGAAGACACACA
CAATGGAGGGTAAACTTCATGATCCAGAAGGCATGGGAATTATTCCAAGAATAGTCAAGATATTTTTAA
TTATATTTACTCCATGGATGAAAATTTGGAATTCATATTAAGGTTTCATATTTTGAAATATATTTGGAT
AAGATAAGGGACCTGTTAGATGTTTCAAAGACCAACCTTTTCAGTTCATGAAGACAAAAACCGAGTCCCT
ATGTAAGGGGTGCACAGAGCGTTTTGTATGTAGTCCAGATGAAGTTATGGATACCATAGATGAAGGAAA
ATCCAACAGACATGTAGCAGTTACAAATATGAATGAACATAGCTCTAGGAGTCACAGTATATTTCTTATT
AATGTCAAACAAGAGAACACACAACCGAACAAAAGCTGAGTGGAAAACCTTATCTGGTTGATTTAGCTG
GTAGTGAAGGTTAGTAAAAGTGGAGCTGAAGGTGCTGTGCTGGATGAAGCTAAAAACATCAACAAGTC
ACTTTCTGCTCTTGGAAATGTTATTTCTGCTTTGGCTGAGGGTAGTACATATGTTCCATATCGAGATAGT
AAAATGACAAGAATCCTTCAAGATTCATTAGGTGGCAACTGTAGAACCCTATTGTAATTTGCTGCTCTC
CATCATCATACAATGAGTCTGAAACAAAATCTACACTCTTATTTGGCCAAAGGGCCAAAACAATTAAGAA
CACAGTTTGTGTCAATGTGGAGTTAACTGCAGAACAGTGGAAAAAGAAAGTATGAAAAAGAAAAAGAAAA
AATAAGATCCTGCGGAACACTATTCAGTGGCTTAAAAAGAGCTCAACAGATGGCGTAATGGGGAGACGG
TGCCTATTGATGAACAGTTTGACAAAGAGAAAGCCAACTTGAAGCTTTCACAGTGGATAAAGATATTAC
TCTTACCAATGATAAACCAGCAACCGCAATTGGAGTTATAGGAAATTTACTGATGCTGAAAGAAGAAAG
TGTGAAGAAGAAATTGCTAAATTATACAACAGCTTGATGACAAGGATGAAGAAATTAACCAGCAAAGC
AACTGGTAGAGAACTGAAGACGCAATGTTGGATCAGGAGGAGCTTTTGGCATCTACCAGAAGGGATCA
AGACAATATGCAAGCTGAGCTGAATCGCCTTCAAGCAGAAAAATGATGCCTCTAAAGAAGAAGTGAAGAA
GTTTTACAGGCCCTAGAAGAAGTGTGTCAATTATGATCAGAAGTCTCAGGAAGTTGAAGACAAAACCTA
AGGAATATGAATTGCTTAGTGTGAATTGAATCAGAAATCGGCAACTTTAGCGAGTATAGATGCTGAGCT
TCAGAACTTAAGGAAATGACCAACCACCAGAAAAACGAGCAGCTGAGATGATGGCATCTTTACTAAAA
GACCTTGCAAAATAGGAATTGCTGTGGAAATAATGATGTAAGCAGCCTGAGGAACTGGCATGATAG
ATGAAGAGTTCAGTGTGCAAGACTCTACATTAGCAAAATGAAGTCAGAAGTAAAAACCATGGTGAACG
TTGCAAGCAGTTAGAAAGCACACAACCTGAGAGCAACAAAAAATGGAAGAAAATGAAAAGGAGTTAGCA
GCATGTCAGCTTCGTATCTCTCAACATGAAGCCAAAATCAAGTATTGACTGAATACCTTAAAAATGTGG
AACAAAAGAAAAGACAGTTGGAGGAATCTGTGATGCCCTCAGTGAAGAACTAGTCCAGCTTCGAGCACA
AGAGAAAGTCCATGAAATGGAAAAGGAGCACTTAAATAAGGTTTCAGACTGCAAAATGAAGTTAAGCAAGCT
GTTGAACAGCAGATCCAGAGCCATAGAGAACTCATCAAAAACAGATCAGTAGTTTGAGAGATGAAGTAG
AAGCAAAAGCAAACTTATTACTGATCTTCAAGACCAAAACAGAAAAATGATGTTAGAGCAGGAACGTCT
AAGAGTAGAACATGAGAAGTTGAAAGCCACAGATCAGGAAAAGAGCAGAAAACTACATGAACTTACGGTT
ATGCAAGATAGACGAGAACAAGCAAGACAAGACTTGAAGGGTTTGAAGAGACAGTGGCAAAAGAAGCTT
AGACTTTACACAACCTGCGCAAACCTTTTGTTCAGGACCTGGCTACAAGAGTTAAAAAGAGTGTGAGAT
TGATTCTGATGACACCGGAGGCAGCGTCTCAGAAGCAAAAAATCTCCTTTCTTGAAAAATAACTTTGAA
CAGCTCACTAAAGTGACAAAACAGTTGGTACGTGATAATGCAGATCTCCGCTGTGAACTTCTAAGTTGG
AAAAGCGACTTCGAGCTACAGCTGAGAGAGTGAAGCTTTGGAATCAGCACTGAAAGAAGCTAAAGAAAA
TGCATCTCGTATCGCAAACGCTATCAGCAAGAAGTAGATCGCATAAAGGAAGCAGTCAGGTCAAAGAAT
ATGGCCAGAAGAGGGCATTCTGCACAGATTGCTAAACCTATTCGTCGCGGCAACATCCAGCAGCTTCTC
CAACTCACCAAGTGAATTCGTGGAGGAGGTGCATTTGTTTCAAGACAGCCAGCCAGTGGCAGTGGCAGG
TGGAGGAGGCAACAAGTGTA
    
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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_004521 unedited  
 ATCCCCGCCCGTTGNCGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCA  
 GAGCTCATTAGGTGACACTATAGAATACAAGCTACTTGTCTTTTTGCAGCGGCCGCGA  
 ATTCGGCACGAGGGCCCAACGGCGGCCTCAGGAGTGATCGGGCAGCAGTCGGCCGGCCAG  
 CGGACGGCAGAGCGGGCGGACGGGTAGGCCCGGCCTGCTCTTCGCGAGGAGGAAGAAGGT  
 GGCCACTCTCCCGGTCCCAGAACCTCCCAGCCCCCGCAGTCCGCCAGACCGTAAAGG  
 GGGACGCTGAGGAGCCGCGGACGCTCTCCCGGTGCCCGCCGCTGCCCGCCCATGGC  
 TGCCATGATGGATCGGAAGTGAGCATTAGGGTTAACGGCTGCCGCGCCGGCTCTTCAAG  
 TCCCGGCTCCCCGGCCGCTCCACCCGGGAAGCGCAGCGCGGCAGCTGACTGCTGCC  
 TCTCACGGCCCTCGCGACCACAAGCCCTCAGGTCGGCGCGTTCCCTGCAAGACTTGAGC  
 GGGGGAGTGGCTCCCGGCCCGGCCCGGCTGCGAGAAAGTGGCGGACCTGGCCGAG  
 TGCAACATCAAAGTGATGTGCCGCTTAGACCTCTCAACGAGTCTGAAGTGAACCGCGC  
 GACCAGTACATCGCCAGGTTTCAGGGAGAAAGACACGGTCGTGATCGCGTCCAAGCCTT  
 ATGCATTTGAATCGGTGGTTCCAGTCAAGCACATTCTCAGCAGCAAGTGTATTATTGAC  
 TGTGCCAAGAACGATGTTCTAAGACGTCCCTTGAAGGATTTATGGGAACACTATTTGGC  
 TTATGGGCAAACCTCCTTTGGGGAACACCCCTTGGAGGGGAACCTTATGAACCACAAG  
 CGTGGGATTATCCCGAAAGCGCCGGAATATTTCAATTTATTCTTCTGGGGAGACCT  
 CGACTTTTACTCG

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_004521 unedited  
 CTGAGGGGCAATAATCTAATTTTTGCCAGNAATAAATATCCTCTTTATTTTCATTGAGTT  
 TCTCTTCTGAACCATCTATCAATGCCATTGAGGAAACGTTAATATATCCAGTCAAAAAG  
 AACTGCAAAATTGAAATGTGCAATATCCTAGATGATCAGAAATTTTCATTTTTAAGAGT  
 AAGTGCTGTGTTAATGACCTACCATAGCAAAAAGCATTTCAGTAAAACAAATTTATGA  
 AATTCTTGGTACACTTTATGAAAGTCTGAAATTATAAATAGAAAAGAACCATCAAGATAC  
 TTTTTAAAACCTAACATTGTATATTCTGAACCACATGCTAATTAATTCGTTGTTTCAT  
 TACACAGCACCAATACCCATGATACATCTTACAAGAACAAAACCTAACATATTTGGAAAAA  
 AGAGAAAAAAAATTTCTGCTTCAATTTACGAATGTTGCCAAAGGAGGCAAGTTTTCAACTG  
 AAAACAAAACATAAAGGTCTATGTGGATGCAGCCAAATGTTTCTCCATTTAGAAAATCAT  
 CATAAAAGGTGGCAGCACTTTTTTTGCTTGTAACTATATTACTTATAACTGGCTGCACC  
 AACATTTTCATCTCAATTTTTGGAGTGTCTTCTGATCAATCCTAAAAGCAACACAATCA  
 TTTTAGAGTTGCAAGACTACAACAGCAAAGATTTTTGACTATTAATAAATAAATAAATAA  
 ATTTATATTTAAATCANAATTATTACAAAAGTGGAAATCTACATAGTTACGGAAATANG  
 AAAATAAGCCAATTATGATCTGAGTCTTCTGACTATGGCTCCAAATTTTATACAATATCT  
 GTGTATAAACTTTTGCNAAAAGTAATTCTGCCAGCNAGATCCCTACACAGAAGTTTTCA  
 AGTTTCTCTGCTAACCTTAATCCCATTCTCTGGC

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_004521

**Insert Size:**

6000 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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:** pass

**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\\_004521.1](#), [NP\\_004512.1](#)

**RefSeq Size:** 3688 bp

**RefSeq ORF:** 2892 bp

**Locus ID:** 3799

**UniProt ID:** [P33176](#)

**Cytogenetics:** 10p11.22

**Domains:** kinesin

**Protein Families:** Druggable Genome

**Gene Summary:** Microtubule-dependent motor required for normal distribution of mitochondria and lysosomes. Can induce formation of neurite-like membrane protrusions in non-neuronal cells in a ZFYVE27-dependent manner (By similarity). Regulates centrosome and nuclear positioning during mitotic entry. During the G2 phase of the cell cycle in a BICD2-dependent manner, antagonizes dynein function and drives the separation of nuclei and centrosomes (PubMed:20386726). Required for anterograde axonal transportation of MAPK8IP3/JIP3 which is essential for MAPK8IP3/JIP3 function in axon elongation (By similarity).[UniProtKB/Swiss-Prot Function]