

## Product datasheet for **MR231496**

### Kif5a (NM\_001039000) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Kif5a (NM_001039000) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Kif5a
Synonyms:	D10Bwg0738e; Khc; Kif5; Kns; mKIAA4086
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR231496 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGGAGACTAACACGAATGCAGCATCAAGGTGCTTTGCCGATTTCCGCCCTGAACCAGGCCGAGA  
TTCTGCGGGGGACAAGTTCATCCCATTTTCCAAGGGGACGACAGCGTCATTATTGGGGAAAGCCATA  
TGTCTTTGACCGCTCTCCCCAAACACCCTCAGGAGCAGGTTTACCACGCCTGTGCCATGCAGATC  
GTCAAAGACGTCCTTGTGGTTACAATGGCACAATCTTCGCTTATGGACAGACATCCTCAGGAAAAACGC  
ATACCATGGAGGGGAAGCTGCACGACCCTCAGCTGATGGGCATCATTCCCGGATCGCTCGAGACATCTT  
CAACCACATCTACTCCATGGATGAGAACCCTGAATTCCACATTAAGGTATCTTACTTCGAGATTTACCTG  
GATAAGATCCGTGACCTTTTGGATGTGACCAAGACGAACCTGTCCGTGCATGAGGACAAAAACCGGTGC  
CGTTTGTCAAGGGTGTACCGAACGCTTTGTGTCCAGCCAGAGGAGATTCTGGATGTGATCGATGAGGG  
GAAGTCCAACCGTCACGTAGCTGTACCAACATGAACGAGCACAGTTCTCGGAGCCACAGCATCTTCCTC  
ATCAACATCAAGCAGGAGAACGTAGAGACCGAGCAGAAGCTCAGCGGGAAGCTGTACCTCGTGGATCTGG  
CCGGAAGCGAGAAGTCAAGACAGGGGCAGAGGGAGCCGTTCTGGACGAGGCAAGAATATCAACAA  
GTCGCTGTCCGCCCTGGGAACGTGATCTCTGCACTGGCAGAGGGCACAAAAGCTACGTGCCGTACCGC  
GACAGCAAAATGACGAGGATTCTCCAGGACTCTCTGGAGGGAAGTGCAGGACTACCATGTTTCATCTGCT  
GCTCGCGTCCAGCTACAATGACGCAGAGACCAAGTCCACGCTCATGTTTGGACAGCGGGCAAGACCAT  
CAAGAACACTGCCTCAGTGAATCTGGAGCTGACTGCTGAGCAGTGAAGAAGAAGTATGAGAAGGAGAAG  
GAGAAGACCAAGGCCAGAAGGAGACAATTGCGAAGCTAGAGGCTGAGCTTAGCCGGTGGCGCAATGGAG  
AGAATGTGCCTGAGACTGAGCGCTGGCTGGAGAGGACTCAGCTCTGGGAGCTGAGCTCTGCGAGGAGAC  
CCCTGTGAATGACAACCTCATCCATTGTGGTACGCATCGCACCTGAGGAAAGGCAGAAATATGAGGAAGAG  
ATCCGCCGTCTCTACAAGCAGCTTGATGACAAGGATGATGAGATCAACCAGCAGAGCCAGCTCATTGAGA  
AGCTGAAGCAGCAGATGCTGGACCAGGAAGAGCTGCTCGTGTCCACTCGGGGAGACAACGAGAAGGTCCA  
GCGGGAGCTTAGCCACCTGCAGTCCGAGAACGATGCTGCGAAGGACGAGGTGAAGGAAGTCTGCAGGCC



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CTAGAGGAGCTGGCGGTCAACTACGACCAGAAGTCCCAGGAGGTGGAGGAGAAGGCCAGCAGAACCAGC  
 TGCTGGTGGACGAGCTGTCCCAGAAAGTGGCCACCATGCTGTCCCTGGAGTCCGAGCTACAGCGGCTCCA  
 GGAGGTCACTGGACACCAGCGAAAGCGGATCGCTGAGGTGCTGAATGGGCTGATGAGGGACCTGAGTGA  
 TTCAGTGTATCGTGGGCAACGGCGAGATTAAGCTGCCGTGGAGATCAGTGGGGCCATCGAGGAGGAGT  
 TCACGGTGGCCCGGCTCTACATCAGCAAGATCAAGTCGGAGGTGAAGTCCGTGGTAAAGCGATGTCGGCA  
 GCTGGAGAACCTCCAGGTGGAGTGTATCGCAAGATGGAGGTGACCGGTAGGGAGCTGTATCTTGCCAA  
 CTGCTCATCTCACAGCATGAGGCCAAGATCCGTTCACTACGGAGTACATGCAGACTGTGGAGTTGAAGA  
 AACGGCACCTGGAAGAGTCTACGACTCCCTGAGCGATGAGCTTGCCAGGCTCCAGGCGCACGAACTGT  
 ACACGAGGTAGCTCTGAAAGACAAGGAGCCAGACACACAGGACGCGGAGGAGGTGAAGAAGGCCCTGGAA  
 CTACAGATGGAGAATCACCGTGAAGGCCATCACCGGCAGCTGGCCCGCTCCGGGATGAGATTAATGAGA  
 AACAGAAAACCTTGTGAGCTGAAAGACCTGAACCAGAAGCTCCAGTTAGAGCTGGAGAAGCTTCAGGC  
 CGACTATGAGAGGCTGAAGAATGAAGAGAACGAGAAGAGCGCCAAGCTCCAGGAGCTGACATTTCTGTAT  
 GAGCGACATGAGCAGTCCAAGCAGGACCTCAAGGGGCTGGAGGAGACAGTTGCCCGTGAAGTCCAGACCC  
 TCCACAACCTTCGAAGCTGTTCTGTTCAAGACGTCACGACTCGAGTCAAGAAAAGTGCAGAAATGGAGCC  
 CGAGGACAGTGGGGGATTCAATCCCAAAGCAGAAGATCTCTTTCTTGAGAACAACCTGGAACAGCTT  
 ACAAAAGTTACAAAACAGCTGGTACGTGACAATGCAGATCTGCGTTGTGAGCTTCTCTAAATTTGAAAAAC  
 GACTTCGGGCTACGGCTGAGAGAGTTAAGGCCCTGGAGGGTGCAGTGAAGGAGGCCAAGGAGGGCGCTAT  
 GAAGGACAAGCGTAGATACCAGCAGGAGGTGGACCGCATCAAAGAAGCCGTGCGGTACAAGAGCTCCGGC  
 AAGCGGGGCCATTCTGCCAGATCGCTAAGCCTGTGAGGCTGGCCACTATCCTGCCTCCTACCCACCA  
 ACCCCTACGGCACCCGGAGCCCCGAGTGTATCAGCTACACCAACAACCTTTCAGAACTACCAGAACCT  
 GCACCTGCAGGCTGCGCCTAGCTCCACTCAGATATGACTTTGCCAGCAGCGGAGCCACATCTGTTGCC  
 CCCTTGGCTTCTACCAGAAGGCCAACATGGACAATGAAATGCCACAGATATCAACGACAACAGGAGTG  
 ACCTGCCGTGTGGCTATGAGGCTGAGGACCAGGCCAAGCTTTCCCTCTCCACCAAGAGACAGCAGCCAG  
 C

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR231496 protein sequence  
 Red=Cloning site Green=Tags(s)

MAETNNECSIKVLCRFRPLNQAEILRGDKFIPIFQDDSVIIGGKPYVDFRVFPNTTQEQQVYHACAMQI  
 VKDVLAGYNGTIFAYGQTSSGKTHMEGKLHDPQLMGIIPRIARDIFNHIYSMDENLEFHIKVSYFEIYL  
 DKIRDLLDVTKTNLVHEDKNRVPFVKGCTERFVSSPEEILDVIDEGKSNRHVAVTNMNEHSSRSHSIFL  
 INIKQENVETEQLSGKLYLVDLAGEKVSKTGAEGAVLDEAKNINKSLSALGNVISALAEGTKSYVYPYR  
 DSKMTRILQDSLGGNCRITMFICCSPPSYNDAETKSTLMFGQRAKTIKNTASVNLLETAEQWKKKYEKEK  
 EKTKAQKETIAKLEAELSRWRNGENVPEPETERLAGEDSALGAELCEETPVNDNSSIVVRIAPEERQKYEEE  
 IRRLYKQLDDKDDEINQQSQLIEKLNQMLDQEELLVSTRGDNEKQREL SHLQSENDAAKDEVKEVLQA  
 LEELAVNYDQKSQEVEEKSQQNQLLVDELQKQVATMLSLESELQRLQEVSGHQRKRIAEVNLNGLMRDLSE  
 FSVIVNGEIKLPVEISGAIEEFTVARLYISKIKSEVKSVMKRCRQLENLQVECHRKMEVTGRELSSCQ  
 LLISQHEAKIRSLTEYMQTVELKKRHLEESYDSLDELARLQAHETVHEVALKDKPEPDTQDAEEVKKALE  
 LQMENHREAHHRQLARLDEINEKQKTIDELKDLNQLQLELEKLQADYERLKNEENEKSAKLQELTFLY  
 ERHEQSKQDLKGLEETVARELQTLHNLRLKLVQDVVTRVKKSAEMEPEDSGGIHSQKQKISFLENNLEQL  
 TKVHKQLVRDNADLRCELPKLEKRLRATAERVKALEGALKEAKEGAMKDKRRYQQEVDRIKEAVRYKSSG  
 KRGHSAQIAKPVPRGHPASSPTNPYGTRESPECISYTNLNFQNYQNLHLQAAPSSSTSDMYFASSGATSV  
 PLASYQKANMDNGNATDINDNRDLPCGYEAEDQAKLFPLHQETAAS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001039000

**ORF Size:** 3084 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\\_001039000.4](#), [NP\\_001034089.1](#)

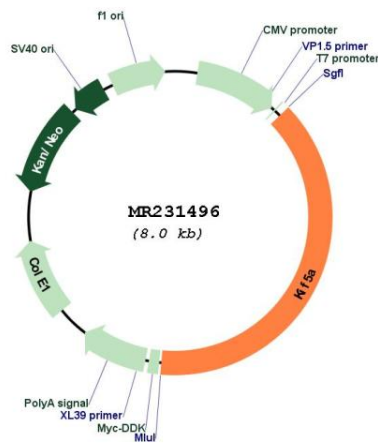
**RefSeq Size:** 6334 bp

**RefSeq ORF:** 3084 bp

**Locus ID:** 16572

**UniProt ID:** [P33175](#)  
**Cytogenetics:** 10 74.5 cM  
**MW:** 117 kDa  
**Gene Summary:** Microtubule-dependent motor required for slow axonal transport of neurofilament proteins (NFH, NFM and NFL) (PubMed:12682084). Can induce formation of neurite-like membrane protrusions in non-neuronal cells in a ZFYVE27-dependent manner. The ZFYVE27-KIF5A complex contributes to the vesicular transport of VAPA, VAPB, SURF4, RAB11A, RAB11B and RTN3 proteins in neurons (PubMed:21976701). Required for anterograde axonal transportation of MAPK8IP3/JIP3 which is essential for MAPK8IP3/JIP3 function in axon elongation (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR231496