

Product datasheet for **RC216778**

KIF5B (NM_004521) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KIF5B (NM_004521) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KIF5B
Synonyms:	HEL-S-61; KINH; KNS; KNS1; UKHC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC216778 representing NM_004521
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCGGACCTGGCCGAGTGCAACATCAAAGTGATGTGTCGCTTCAGACCTCTCAACGAGTCTGAAGTGA
 ACCGCGGCGACAAGTACATCGCCAAGTTTCAGGGAGAAGACACGGTTCGTGATCGCGTCCAAGCCTTATGC
 ATTTGATCGGGTGTCCAGTCAAGCACATCTCAAGAGCAAGTGTATAATGACTGTGCAAAGAAGATTGTT
 AAAGATGTAAGGATATAATGGAACAATATTTGCATATGGACAAACATCCTCTGGGAAGACACACA
 CAATGGAGGGTAACTTCATGATCCAGAAGGCATGGGAATTATCCAAGAATAGTGAAGATATTTTTAA
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 AAGATAAGGGACCTGTTAGATGTTTCAAAGACCAACCTTCAGTTCATGAAGACAAAACCGAGTCCCT
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 GTAGTGAAGAGTTAGTAAAACCTGGAGCTGAAGGTGCTGTGCTGGATGAAGCTAAAAACATCAACAAGTC
 ACTTTCTGCTCTTGAAAATGTTATTTCTGCTTTGGCTGAGGGTAGTACATATGTTCCATATCGAGATAGT
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 TCAGAACTTAAGGAAATGACCAACCACGAAAAACGAGCAGCTGAGATGATGGCATCTTTACTAAAA
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 ATGAAGAGTTCAGTGTTCAGACTCTACATTAGCAAAATGAAGTCAAGTAAAAACCATGGTGAACCG
 TTGCAAGCAGTTAGAAAGCACACAACTGAGAGCAACAAAAAAATGGAAGAAATGAAAAGGAGTTAGCA
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ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC216778 representing NM_004521
 Red=Cloning site Green=Tags(s)

MADLAECNIKVMCRFRPLNESEVNRGDKYIAKFQGEDTVVIASKPYAFDRVFSSTSQEQQVYNDCAKKIV
 KDVLEGYNGTIFAYGQTSSGKTHMEGLHDPEGMGIIPRIVQDIFNYIYSMDENLEFHIVSYFEIYLD
 KIRDLLDVSKTNLSVHEDKNRPVYVKGCTERFVCSPEVMDTIDEGKSNRHVAVTNMNEHSSRSHSIFLI
 NVKQENTQTEQKLSGKLYLVDLAGSEKVSKTGAEGAVLDEAKNINKLSALGNVISALAEGSTYVPYRDS
 KMTRILQDSLGGNCRRTTIVICCPSSYNESETKSTLLFGQRAKTIKNTVCVNVELTAEQWKKKYEKEKEK
 NKILRNTIQWLENELNRWRNGETVPIDEQFDKEKANLEAFTVDKDITLTNDKPATAIGVIGNFTDAERRK
 CEEEI AKLYKQLDDKDEEINQSQLVEKLTQMLDQEELLASTRDQDNMQAELNRLQAENDASKEEVEKE
 VLQALEELAVNYDQKSQEVEDKTKYEYLLSDELNQKSATLASIDAELQKLKEMTNHQKRAAEMMASLLK
 DLAEIGI AVGNNDVKQPEGTGMIDEFTVARLYISKMKSEVKTMVKRCKQLESTQTESNKKMEENEKELA
 ACQLRISQHEAKIKSLTEYLQNVEQKKRQLEESVDALSEELVQLRAQEKVHEMEKEHLNVQVTANEVKQA
 VEQQIQSHRETHQKQISSLRDEVEAKAKLITDLQDQNKMMLEQERLVEHEKLIKATDQEKSRKLHELTV
 MQDRREQARQDLKGL EETVAKELQTLHNLRLKLFVQDLATRVKKS AEIDSDDTGGSAAQKQKISFLENLE
 QLT KVHKQLVRDNADLRCEL PKLEKRLRATAERVKALESALKEAKENASRDRKRYQQEVDRIKEAVRSKN
 MARRGHS AQIAKPIRPGQHPAASPTHP SAIRGGGAFVQNSQPVA VRGGGGKQV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_004521

ORF Size: 2889 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 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: 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_004521.3](#)

RefSeq Size: 3688 bp

RefSeq ORF: 2892 bp

Locus ID: 3799

UniProt ID: [P33176](#)

Cytogenetics: 10p11.22

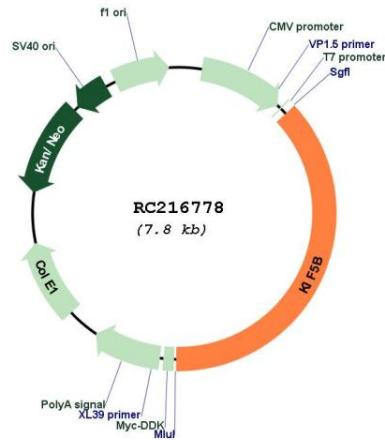
Domains: kinesin

Protein Families: Druggable Genome

MW: 109.5 kDa

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]

Product images:

Circular map for RC216778