

Product datasheet for **RG230728**

KIF21A (NM_001173464) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KIF21A (NM_001173464) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	KIF21A
Synonyms:	CFEOM1; FEOM1; FEOM3A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG230728 representing NM_001173464 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTTGGGCGCCCGGACGAGAGCTCCGTGCGGGTGGCTGTCAGAATAAGACCACAGCTTGCCAAAGAGA
AGATTGAAGGATGCCATATTTGTACATCTGTCACACCAGGAGAGCCTCAGGTCTTCTAGGGAAAGATAA
GGCTTTTACTTTGACTATGATTTGACATTGACTCCCAGCAAGAGCAGATCTACATTCAATGTATAGAA
AACTAATTGAAGTTGCTTTGAAGGATACAATGCTACAGTTTTGCTTATGGACAACTGGAGCTGGTA
AAACATACACAATGGGAACAGGATTTGATGTTAACATTGTTGAGGAAGAACTGGGTATTATTTCTCGAGC
TGTTAAACACCTTTTAAAGATATTGAAGAAAAAACACATAGCAATTAATAATGGGCTTCTGCTCCA
GATTTTAAAGTGAATGCCAATCTTAGAGCTCTATAATGAAGAGGTCCTTGACTTATTTGATACCACTC
GTGATATTGATGCAAAAAGTAAAAATCAATATAAGAATTCATGAAGATTCAACTGGAGGAATTTATAC
TGTGGGCGTTACAACACGTAAGTGTGAATACAGAATCAGAGATGATGCAGTGTTTGAAGTTGGGTGCTTTA
TCCCGGACAACTGCCAGTACCCAGATGAATGTTTCAGAGCTCTCGTTCACATGCCATTTTACCATTGATG
TGTGTCAAACAGAGTGTGTCCTCAATAGATGCTGACAATGCAACTGATAATAAAATTTTCTGAATC
AGCACAGATGAATGAATTTGAAACCTGACTGCAAAGTTCCATTTTGTGATCTCGCAGGATCTGAAAGA
CTGAAGCGTACTGGAGCTACAGGCGAGAGGGCAAAGAAGGCATTTCTATCAACTGTGGACTTTTGGCAC
TTGGCAATGTAATAAGTGCCTTGGGAGACAAGAGCAAGAGGGCCACACATGTCCTTATAGAGATTCCAA
GCTAACAAAGACTACTACAGGATTCCTCGGGGTAATAGCCAAACAATCATGATAGCATGTGTCAGCCCT
TCAGACAGAGACTTTATGGAAACGTTAAACACCCTGAAATACGCCAATCGAGCTAGAAAATATCAAGAATA
AGGTGATGGTCAATCAGGACAGAGCTAGTCAGCAATCAATGCACTTCGTAGTGAATCACACGACTTCA
GATGGAGCTCATGGAGTACAAAACAGGTAAGAATAATTGACGAAGAGGGTGTGGAAAGCATCAATGAC
ATGTTTCATGAGAATGCTATGCTACAGACTGAAAATAATAACCTGCGTGAAGAATTAAGCCATGCAAG
AGACGGTTGATGCATTGAGGTCCAGAATTACACAGCTTGTAGTGATCAGGCCAACCATGTTCTTGCCAG
AGCAGGTGAAGGAAATGAGGAGATTAGTAATATGATTCATAGTTATATAAAGAAATCGAAGATCTCAGG



[View online >](#)

GCAAAATTATTAGAAAGTGAAGCAGTGAATGAGAACCTTCGAAAAAAGTTCACAAGACCCAGCAAGAG
 CGCCATATTTTCAGCGGATCATCACTTTTTCTCTACCATACTATCCTCAGACAAAGAAACCATTGAAAT
 TATAGACCTAGCAAAAAAGATTTAGAGAAGTTGAAAAGAAAAGAAAGAGGAAGAAAAAGGCTACAG
 AAATTGAGGAAAGCAATCGAGAAGAAAGAGTGTGGCTGGTAAAGAGGATAATACAGACACTGACCAAG
 AGAAGAAAAGAAAAGGGTGTTCGGAAAAGAGAAAACAATGAATTAGAAGTGAAGAAAAGTCAAGAAGT
 GAGTGATCATGAGGATGAAGAAGAGGAGGAGGAGGAGGAGGAAGATGACATTGATGGGGGTGAAAGTTCT
 GATGAATCAGATTCTGAATCAGATGAAAAGCCCAATTATCAAGCAGACTTGGCAAACATTACTTGTGAAA
 TTGCAATTAAGCAAAAGCTGATTGATGAACTAGAAAACAGCCAGAAAAGACTGCAGACTCGAAAAAGCA
 GTATGAAGAGAAGCTAATGATGTGCAACATAAAATTCGGGATACTCAGCTTGAAAGAGACCAGGTGCTT
 CAAAATTAGGCTCGGTAGAATCTTACTCAGAAGAAAAGCAAAAAAGTTAGGTCTGAATATGAAAAGA
 AACTCCAAGCCATGAACAAAGAACTGCAGAGACTTCAAGCAGCTCAAAAAGAACATGCAAGGTTGCTTAA
 AAATCAGTCTCAGTATGAAAAGCAATTGAAGAAATTCAGCAGGATGTGATGAAATGAAAAACAAG
 GTTCGCCTAATGAAACAATGAAAGAAGAACAGAGAAAGCCAGACTGACTGAGTCTAGAAGAACAGAG
 AGATTGCTCAGTTGAAAAAGGATCAACGTAAGAGATCATCACTTAGACTTCTGGAAGCCAAAAAG
 AAACCAAGAAGTGGTCTACGTCGAAAAGTGAAGAGTTACGGCTCTTCGTCGGCAAGTAAAGCCCATG
 TCAGATAAAGTGGCTGGGAAAGTTACTCGAAGCTGAGTTCATCTGATGCACCTGCTCAGGACACAGGTT
 CCAGTGCAGCTGCTGCGAAACAGATGCATCAAGGACAGGAGCCAGCAGAAAATGAGAATTCCTGTGGC
 GAGAGTCCAGGCCTTACCAACGCCGGCAACAAATGGAAACAGGAAAAATATCAGAGGAAAGGATTGACT
 GGCCGAGTGTATTTCCAAGACAGCTCGCATGAAGTGGCAGCTCCTTGAGCGCAGGGTACAGACATCA
 TCATGCAGAAGATGACCATTTCCAACATGGAGGCAGATATGAATAGACTCCTCAAGCAACGGGAGGAACT
 CAAAAAGACGAGAGAACTTTCAAAAAGAGGGAAGATAGTCAAGGAGAATGGAGAGGGAGATAAA
 AATGTGGCTAATCAATGAAGAGATGGAGTCACTGACTGCTAATATCGATTACATCAATGACAGTATTT
 CTGATTGTCAAGCCAACATAATGCAGATGGAAGAAGCAAGGAAGAAGGTGAGACATTTGGATTTACTGC
 AGTCAATTAAGCCTGCACCTTACAGAAGCCGATACCTGCTAGACTCACTTCTGTCAATGGGCATCAAT
 AAGGGTCTTCAGGCTGCCAGAAAGAGGCTCAAATTAAGTACTGGAAGGTGACTCAAACAAACAGAAA
 TAACCAGTGTACCCAAAACCAGCTCTTATCCATATGTTGAAAGAGAAGGCAGAAATTAATCCTGAGCT
 AGATGCTTACTAGGCCATGCTTACAAGATCTAGATAGCGTACCATTAGAAAATGTAGAGGATAGTACT
 GATGAGGATGCTCCTTAAACAGCCAGGATCAGAAGGAAGCACGCTGTCTTTCAGATCTCATGAAGCTTT
 GTGGTGAAGTGAACCTAAGAACAAGGCCGAAGGAGAACCACCCTCAGATGGAATGCTGTATGCAGA
 TAGCAGTGAAGTACTCAGACACTAGTACAGGAGATGCCTCCTGCTGGCCCTCACACCTGTTGCA
 GAAGGGCAAGAGATTGGAATGAATACAGAGACAAGTGGTACTTCTGCTAGGAAAAAGAGCTCTCTCCC
 CACTGGCTTACCTTCTAAGATAGGCAGCATTTCCAGGCAGTCACTCTATCAGAAAAAAAATTCAGA
 GCCTTCTCCTGTAAACAAGGAGAAAGGCATATGAGAAAAGCAGAAAAATCAAAGGCCAAGGAACAAAAGCAC
 TCAGATTCTGAACTTCAGAGGCTAGTCTTTCACCTCCTTCTTCCCACCAAGCCGGCCCGTAATGAAC
 TGAATGTTTTTAATCGTCTTACTGTTTCTCAGGAAAACACATCAGTTCAGCAGGATAAGTCTGATGAAA
 TGACTCCTCTCTCGGAGGTACACAGATCCTCCAGAAGGGGCATAATCAACCCATTTCTGTCTTCAAAA
 GGAATCAGAGCTTTTCCACTTCAGTGTATTACATAGCTGAAGGGCATACAAAAGCTGTGCTCTGTGTGG
 ATTTACTGATGATCTCCTTCTCAGTGGATCAAAAAGATCGTACTTGTAAAGTATGGAATCTGGTACTGG
 GCAGGAAATAATGCTCACTGGGGGTCATCCCAACAATGTCGTGTCTGTAATACTGTAATATACCAGT
 TTGGTCTTCACTGTATCAACATCTTATATTAAGGTGTGGATATCAGAGATTGAGCAAAAGTGCATTGGA
 CACTAACGCTTTCAGGTCAAGTACTCTTGGAGATGCTTGTCTGCAAGTACCAGTCAACAGTACTAT
 TCCTTCTGGAGAGAACCAGATCAATCAAATTCCTTAAACCAACTGGCACCTTCTCTATGCTGTTCT
 GGAAATGCTGTCAGGATGTGGATCTTAAAAGTTTTCAGTCTACAGGAAAGTTAACAGGACACCTAGGCC
 CTGTTATGTGCCTTACTGTGGATCAGATTTCCAGTGGACAAGATCTAATCATCACTGGCTCCAAGGATCA
 TTACATCAAAATGTTGATGTTACAGAAGGAGCTCTTGGGACTGTGAGTCCCACCAACAATTTGAACCC
 CCTCATTATGATGGCATAGAAGCACTAACCAATCAAGGGGATAACCTATTTAGTGGGTCTAGAGATAATG
 GAATCAAGAAATGGGACTTAACTCAAAAAGACCTTCTTCAAGCAAGTTCCAATGCACATAAGGATTGGGT
 CTGTGCCCTGGGAGTGGTCCAGACCACCAAGTTTGTCTAGTGGCTGCAGAGGGGGCATTTTGAAAGTC
 TGAACATGGATACTTTATGCCAGTGGGAGAGATGAAGGGTCATGATAGTCTATCAATGCCATATGTG
 TTAATTCACCCACATTTTACTGCAGCTGATGATCGAACTGTGAGAATTTGGAAGGCTCGCAATTTGCA
 AGATGGTCAGATCTTGACACAGGAGATCTGGGGGAAGATATTGCCAGTAAT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG230728 representing NM_001173464
 Red=Cloning site Green=Tags(s)

MLGAPDESSVRVAVRIRPQLAKEKIEGCHICTSVTPGEPQVFLGKDKAFTFDYVFDIDSQQEQIYIQCIE
 KLIEGCFEGYNATVFAYGQTGAGKTYTMGTGFDVNIVEEELGII SRAVKHLFKSIEEKKHIAIKNGLPAP
 DFKVNAQFLELYNEEVLDFDTRRIDAKSKSNIRIHEDSTGGIYTVGVTRTVNTESEMMQCLKLGAL
 SRTTASTQMNQSSRSHAI FTIHCQTRVCPQIDADNADNKI ISESAQMNEFETLTAKFHFVLAGSER
 LKRTGATGERAKEGISINCGLLALGNVISALGDKSKRATHVPYRDSKLRLLQDSLGGNSQTIMIACVSP
 SDRDFMETLNTLKYANRARNIKNKVMVNQDRASQQINALRSEITRLQMELEMYKTGKRIIDEEGVESIND
 MFHENAMLQTENNLRVRIKAMQETVDALRSRITQLVSDQANHVLARAGEGNEEISNMIHSYIKEIEDLR
 AKLLESEAVNENLRKNL TRATARAPYFSGSSTFSPTILSSDKETIEIIDLAKKDLEKLRKREKRRKKRLQ
 KLEESNREERSVAGKEDNTD TDQEKKEEKGVSERENNELEVEESQEVSDHEDEEEEEEEEDDIDGGESS
 DESDSESEKANYQADLANITCEIAIKQKLI DELENSQKRLQTLKKQYEEKLMMLQHKIRDTQLERDQVL
 QNLGSVESYSEEKAKKVRSEYEKQLQAMNKELQRLQAAQKEHARLLKNQSQYEKQLKQLQDVMEMKTK
 VRLMKQMKEEQEKARL TESRRNREIAQLKDKQRKRDLRLLEAQKRNQEVVLRRKTEEVTALRRQVRPM
 SDKVAGKVT RKLSSSDAPAQDTGSSAAAVETDASRTGAQQMRIPVARVQALPTPATNGNRKRYQRKGLT
 GRVFI SKTARMKWQLLERRVTDIIMQMTISNMEADMNRLKQREELTKRREKLSKRREKIVKENGEGDK
 NVANINEEMESLTANIDYINDSISDCQANIMQMEEAKEEGETLDVTAVINACTL TEARYLLDHF LSMGIN
 KGLQAAQKEAQIKVLEGR LKQTEITSATQNQLLFHMLKEKAELNPELDALLGHALQDLDSVPLENVEDST
 DEDAPLNSPGSEGSTLSSDLMKLCGEVKPKNKARRRRTTQMELL YADSSSELASDTSTGDASLPGLTPVA
 EGQEIGMNTETSGTSAREKELSPPPGLPSKIGSISRQSSLSEKKIPEPSPVTRRKAYEKAESKAKEQKH
 SDSGTSEASLSPSSPPSRPNELNVFNRLTVSQGNTSVQQDKSDESDSSLSEVHRSSRRGIINPFPAK
 GIRAFPLQCIHIAEGHTKAVLCVDSTDDLLFTGSKDRCTCKVWNLVTGQEIMSLGGHPNNVSVKYCNYTS
 LVFTVSTSYIKVWDIRDSAKCIRTLTSSGQVTLGDACASSTRTVAIPSGENQINQIALNPTGTFLYAAS
 GNAV RMWDLKRFQSTGKLTGHLGPVMCLTVDQISSGQDLIITGSKDHYIKMFDVTEGALGTVSPHNFEP
 PHYDGI EALTIQGDNLFSGRSDNGIKKWDLTQKDLLQV PNAHKDWVCALGVVPDHPVLLSGCRGGILKV
 WNMDTFMPVGMKGHDS PINAICVNSTHIFTAADDRTVRIWKARNLQDGGISDTGDLDGEDIASN

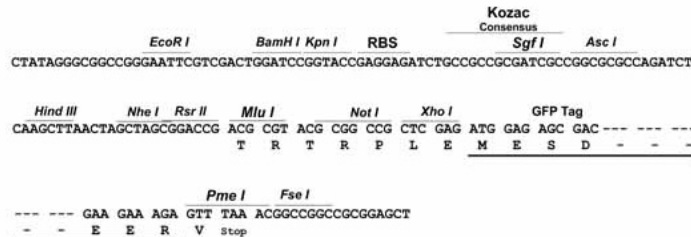
TRTRPLE - GFP Tag - V

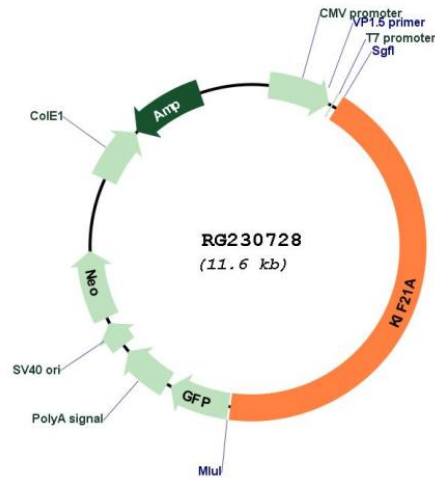
Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:


ACCN: NM_001173464

ORF Size: 5022 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_001173464.2](#)

RefSeq Size: 6653 bp

RefSeq ORF: 5025 bp

Locus ID: 55605

UniProt ID: [Q7Z4S6](#)

Cytogenetics: 12q12

Protein Families: Druggable Genome

Gene Summary: This gene encodes a member of the KIF4 subfamily of kinesin-like motor proteins. The encoded protein is characterized by an N-terminal motor domain a coiled-coil stalk domain and a C-terminal WD-40 repeat domain. This protein may be involved in microtubule dependent transport. Mutations in this gene are the cause of congenital fibrosis of extraocular muscles-1. Alternate splicing results in multiple transcript variants.[provided by RefSeq, Mar 2010]