

## Product datasheet for **MR206460**

### Eif4a3 (NM\_138669) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Eif4a3 (NM_138669) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Eif4a3
Synonyms:	2400003O03Rik; Ddx48; eIF4A-III; mKIAA0111
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR206460 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGC**C

ATGGCGGCTAACGCCACGATGGCGACGTCTGGCTCGGCGCGGAAGCGGCTGCTCAAAGAGGAGGACATGA  
CCAAAGTGGAGTTCGAGACGAGCGAGGAGGTGGACGTGACCCACGTTTCGACACCATGGCCTGCGAGA  
GGACCTGCTGCGCGGCATCTACGCCTACGGTTTTGAAAAACCTTCAGCGATTTCAGCAGCGTGTCTATCAAG  
CAGATAATTAAGGGAGAGATGTATTGCACAGTCTCAGTCTGGCACAGGCAAGACGGCCACCTTCAGT  
TCTCAGTGTGCAAGTCTGGATATCCAGGTTTCGAGAAACCAAGCTTTGATCCTGGCTCCAACCAAGGA  
GTTAGCGGTGCAGATTCAGAAGGGTCTGCTCGCGCTGGGGGATTACATGAACGTGCAGTGCCATGCCTGC  
ATTGGGGGCCAACGTCGGCGAGGACATCCGGAAGCTGGACTACGGACAGCACGTGGTGGCAGGCACGC  
CGGGACGCGTCTTTGATATGATCCGCCGAGAAGTTTACGGACACGGGCTATCAAGATGCTGGTTTTGGA  
TGAGGCTGATGAAATGTTGAACAAAGTTTTCAAGGAGCAGATCTATGATGTGTACAGGTACTTGCCACCA  
GCCACACAGGTCTCTCATCAGCGCCACACTGCCTCATGAGATCCTGGAGATGACCAACAAGTTTCATGA  
CCGACCCCATCCGCATCTTGGTGAAGCGTGATGAGTTGACTCTGGAAGGCATCAAACAGTCTTTGTGGC  
TGTGAAAAGAGAGGAATGGAAATTTGACTCTATGTGATCTCTATGACACGCTGACCATCACCCAGGCC  
GTCATCTTCTGCAACACCAAGCGGAAGTTGACTGGCTGACAGAGAAAATGAGAGAAGCCAATTTCACTG  
TGTCGTCCATGCATGGAGACATGCCCCAGAAAGAACGAGAGTCTATCATGAAGGAGTTCGGTCCAGGTGC  
CAGCCGGGTGCTCATCTCCACAGACGTCTGGGCCCGGGCCTGGATGTCCCTCAGGTGTCCCTCATCATT  
AACTACGACCTGCCCAACAACAGAGAAGTGTACATTACAGAATTGGGAGATCGGGTCCGGTATGGACGAA  
AAGGTGTGGCCATCAATTTGTGAAGAATGATGACATCCGGATTCTCAGGGACATTGAGCAGTACTACTC  
CACCCAGATAGACGAGATGCCCATGAATGTGGCTGACCTCATC

AG**CGGACCG**ACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGATAAGGTTTAA



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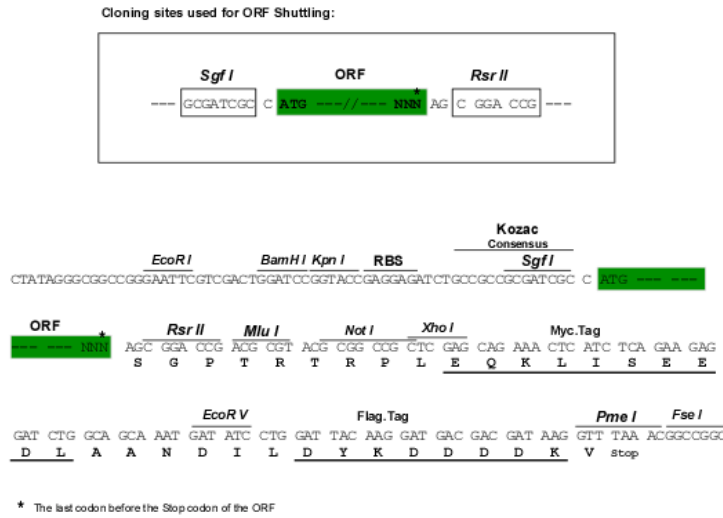
**Protein Sequence:** >MR206460 protein sequence  
Red=Cloning site Green=Tags(s)

MAANATMATSGSARKRLLKEEDMTKVEFETSEEVDVTPFTDFTMGLREDLLRGIYAYGFEKPSAIQQRAIK  
 QIIKGRDVIAQSQSGTGKTATFSVSVLQCLDIQVRETQALILAPTRELAVQIQKGLLALGDYMNVCCHAC  
 IGGTNGVEDIRKLDYGQHVVAGTPGRVDFMIRRRSLRTRAIKMLVLDEADEMLNKGFKQIYDVYRLLPP  
 ATQVVLISATLPHEILEMTNKFMTDPIRILVKRDELLEGIKQFFVAVEREEMKFDLCLDYDTLITITQA  
 VIFCNTKRKVDWLTEKMREANFTVSSMHGDMQPQKERESIMKEFRSGASRVLISTDVWARGLDVPPQVSLII  
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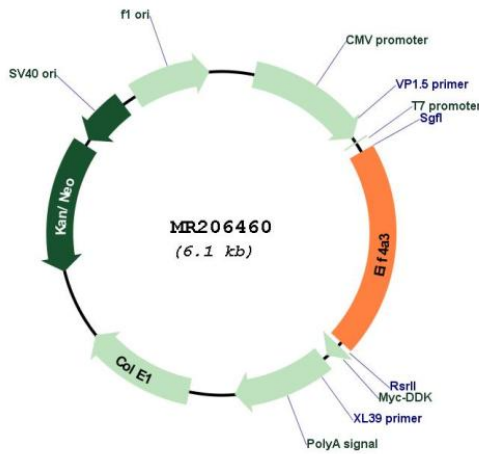
SGPTRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-RsrII

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_138669

<b>ORF Size:</b>	1236 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_138669.1</a> , <a href="#">NP_619610.1</a>
<b>RefSeq Size:</b>	1489 bp
<b>RefSeq ORF:</b>	1236 bp
<b>Locus ID:</b>	192170
<b>UniProt ID:</b>	<a href="#">Q91VC3</a>
<b>Cytogenetics:</b>	11 E2
<b>MW:</b>	46.8 kDa

**Gene Summary:**

ATP-dependent RNA helicase. Involved in pre-mRNA splicing as component of the spliceosome. Core component of the splicing-dependent multiprotein exon junction complex (EJC) deposited at splice junctions on mRNAs. The EJC is a dynamic structure consisting of core proteins and several peripheral nuclear and cytoplasmic associated factors that join the complex only transiently either during EJC assembly or during subsequent mRNA metabolism. The EJC marks the position of the exon-exon junction in the mature mRNA for the gene expression machinery and the core components remain bound to spliced mRNAs throughout all stages of mRNA metabolism thereby influencing downstream processes including nuclear mRNA export, subcellular mRNA localization, translation efficiency and nonsense-mediated mRNA decay (NMD). Its RNA-dependent ATPase and RNA-helicase activities are induced by CASC3, but abolished in presence of the MAGOH-RBM8A heterodimer, thereby trapping the ATP-bound EJC core onto spliced mRNA in a stable conformation. The inhibition of ATPase activity by the MAGOH-RBM8A heterodimer increases the RNA-binding affinity of the EJC. Involved in translational enhancement of spliced mRNAs after formation of the 80S ribosome complex. Binds spliced mRNA in sequence-independent manner, 20-24 nucleotides upstream of mRNA exon-exon junctions. Shows higher affinity for single-stranded RNA in an ATP-bound core EJC complex than after the ATP is hydrolyzed. Involved in the splicing modulation of BCL2L1/Bcl-X (and probably other apoptotic genes); specifically inhibits formation of proapoptotic isoforms; the function is different from the established EJC assembly. Involved in craniofacial development.[UniProtKB/Swiss-Prot Function]