

Product datasheet for **RN201451**

Eif4a3 (NM_001100158) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Eif4a3 (NM_001100158) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Eif4a3
Synonyms:	eIF4A-III
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>RN201451 representing NM_001100158 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**C

ATGGCGGCCACGGCCACGATGGCGACGTCGGGCTCCGCGCGGAAGCGGCTGCTCAAAGAGGAGGACATGA
CCAAAGTGGAGTTCGAGACCAGCGAGGAGGTGGACGTGACCCACGTTTCGACACCATGGGCCTTCGGGA
GGACCTGCTGCGCGGCATCTACGCCTACGGTTTTGAAAAACCTTCTGCGATCCAACAGCGTGCTATCAAG
CAGATAATTAAGGGAGAGATGTCATTGCACAGTCTCAGTCTGGCACAGGCAAGACGGCCACCTTCAGTA
TTTCAGTCCTTCAGTGCTTGGATATCCAGGTTTCGAGAAACCAAGCTTTGATATTGGCTCCAACAAGAGA
GTTAGCAGTGCAGATTCAGAAGGGTCTGCTTGGCTTTGGGGGATTACATGAACGTGCAGTGCCATGCCTGC
ATTGGTGGCACCATGTCGGGGAGGACATCCGGAAGCTGGACTATGGGCAGCATGTTGTGGCGGGCACAC
CAGGACGAGTCTTTGATATGATCCGCCGTAGAAGTTTAAGGACACGGGCAATCAAGATGTTGGTTTTGGA
TGAAGCTGATGAAATGTTGAACAAAGGTTTCAAGGAGCAGATCTATGACGTGTACAGGTAAGTTCACCA
GCCACTCAGGTTGTTCTCATCAGCGCCACGCTGCCCCATGAGATCCTGGAGATGACCAACAAGTTCATGA
CCGACCCCATCCGCATCTTGGTGAAGCGTGATGAGTTGACTCTGGAAGGCATCAAACAGTTCTTCGTGGC
CGTGAAAGAGAGGAATGGAAGTTCGACACTCTCTGTGATCTCTACGACACGCTGACCATCACCCAGGCT
GTCATCTTCTGCAACACCAAGAGGAAGTTGACTGGCTGACAGAGAAAATGAGAGAAGCCAATTTACAG
TGTGTCATGCACGGAGACATGCCCCAGAAAGAGCGTGAGTCCATCATGAAGGAGTTCCGGTCAGGTGC
CAGCCGAGTGCTCATCTCCACAGATGTCTGGGCGCGGGGCTCGATGTCCTCAGGTGTCCTCATCATT
AACTATGACCTGCCCAACAACAGAGAACTGTACATTACAGAATCGGGAGATCAGGTCGATATGGACGCA
AAGGTGTGGCCATCAATTTGTGAAGAATGATGACATCCGCATCCTCAGGGACATTGAGCAGTACTACTC
CACCCAGATAGATGAGATGCCTATGAATGTGGCTGACCTCAT**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Restriction Sites:	Sgfl-Mlul
ACCN:	NM_001100158
Insert Size:	1236 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<ol style="list-style-type: none"> 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:	<u>NM_001100158.2, NP_001093628.1</u>
RefSeq Size:	1515 bp
RefSeq ORF:	1236 bp
Locus ID:	688288
UniProt ID:	<u>Q3B8Q2</u>
Cytogenetics:	10q32.3

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]