

## Product datasheet for RC201391

### EIF4EL3 (EIF4E2) (NM\_004846) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	EIF4EL3 (EIF4E2) (NM_004846) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	EIF4EL3
Synonyms:	4E-LP; 4EHP; EIF4EL3; h4EHP; IF4e
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC201391 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAACAACAAGTTCGACGCTTTGAAAGATGATGACAGTGGGACCATGATCAGAATGAAGAAAACAGCA  
CACAGAAAGATGGTGAGAAGGAAAAACGGAACGAGACAAGAATCAGAGCAGTAGCAAGAGAAAGGCTGT  
TGTCCCTGGACCGGCAGAGCATCCCTGCAGTACAACACTACTTTTTGGTACTCCAGGAGAACCCCGGC  
CGTCCCACGAGCTCACAGAGCTATGAACAGAATATCAAACAGATTGGCACCTTTCCTCTGTGGAGCAGT  
TCTGGAGGTTTTATAGCCACATGGTACGTCCTGGGGACCTGACAGGCCACAGTGACTTCCATCTCTCAA  
AGAAGGAATTAACCCATGTGGGAGGATGATGCAAATAAAAATGGTGGCAAGTGGATTATTCGGCTGCGG  
AAGGGCTTGGCCTCCCGTTGCTGGGAGAATCTCATTGTTGGCCATGCTGGGGAAACAGTTCATGGTTGGG  
AGGAGATCTGTGGGGCTGTGGTGTCTGTCCGCTTTCAGGAAGACATTATTTCAATATGGAATAAGACTGC  
CAGTGACCAAGCAACCACAGCCGAATCCGGGACACACTTCGGCGAGTGCTTAACCTACCTCCCAACACC  
ATTATGGAATACAAAACCTCACACCGACAGCATCAAATGCCAGGCAGGCTGGGCCCCAAAGGCTCCTTT  
TTCAAACCTCTGGAAGCCGCGTTGAATGTGCCA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC201391 protein sequence  
Red=Cloning site Green=Tags(s)

MNNKFDALKDDDDSGDHDQNEENSTQKDGEKEKTERDKNQSSSKRKAVVPGPAEHPLQYNYTFWYSRRTPG  
 RPTSSQSYEQNIKQIGTFASVEQFWRFYSHMVRPGDLTGHSDFHFLKEGIKPMWEDDANKNGGKWIIRLR  
 KGLASRCWENLILAMLGEQFMVGEEICGAVVSVRFQEDIISIWNKTASDQATTARIRDTLRRVLNLPNT  
 IMEYKTHDTSIKMPGRLGPQRLLFQNLWKPRLNVP

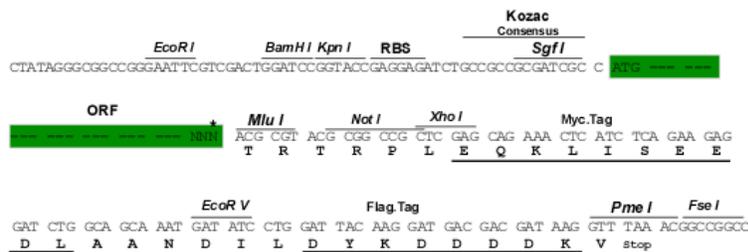
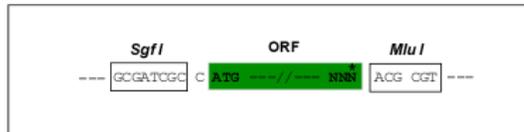
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6075\\_a07.zip](https://cdn.origene.com/chromatograms/mk6075_a07.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_004846

**ORF Size:** 735 bp

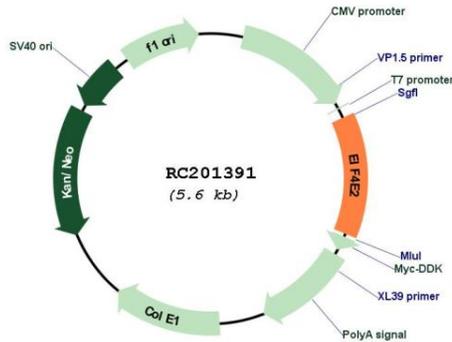
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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](mailto: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](#)

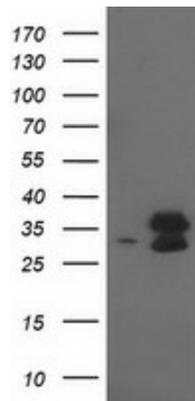
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<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>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_004846.4</a>
<b>RefSeq Size:</b>	1078 bp
<b>RefSeq ORF:</b>	738 bp
<b>Locus ID:</b>	9470
<b>UniProt ID:</b>	<a href="#">O60573</a>
<b>Cytogenetics:</b>	2q37.1
<b>Domains:</b>	IF4E
<b>Protein Families:</b>	Transcription Factors
<b>Protein Pathways:</b>	Insulin signaling pathway, mTOR signaling pathway
<b>MW:</b>	28.4 kDa
<b>Gene Summary:</b>	Recognizes and binds the 7-methylguanosine-containing mRNA cap during an early step in the initiation (PubMed:9582349, PubMed:17368478, PubMed:25624349). Acts as a repressor of translation initiation (PubMed:22751931). In contrast to EIF4E, it is unable to bind eIF4G (EIF4G1, EIF4G2 or EIF4G3), suggesting that it acts by competing with EIF4E and block assembly of eIF4F at the cap (By similarity).[UniProtKB/Swiss-Prot Function]

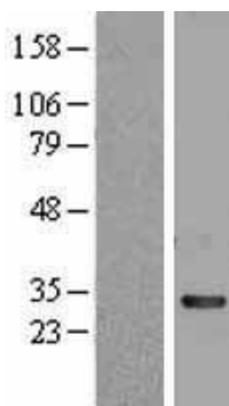
Product images:



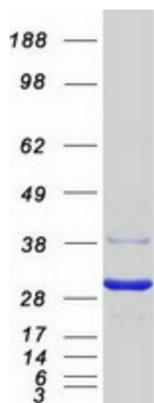
Circular map for RC201391



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY EIF4E2 (Cat# RC201391, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-EIF4E2 (Cat# [TA502403]). Positive lysates [LY401518] (100ug) and [LC401518] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401518]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201391 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified EIF4E2 protein (Cat# [TP301391]). The protein was produced from HEK293T cells transfected with EIF4E2 cDNA clone (Cat# RC201391) using MegaTran 2.0 (Cat# [TT210002]).