

## Product datasheet for **RC200612**

### **EIF3B (NM\_001037283) Human Tagged ORF Clone**

#### **Product data:**

|                           |                                              |
|---------------------------|----------------------------------------------|
| Product Type:             | Expression Plasmids                          |
| Tag:                      | Myc-DDK                                      |
| Symbol:                   | EIF3B                                        |
| Synonyms:                 | EIF3-ETA; EIF3-P110; EIF3-P116; EIF3S9; PRT1 |
| Mammalian Cell Selection: | Neomycin                                     |
| Vector:                   | pCMV6-Entry (PS100001)                       |
| E. coli Selection:        | Kanamycin (25 ug/mL)                         |



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**ORF Nucleotide  
Sequence:**

&gt;RC200612 ORF sequence

Red=Cloning site Blue=ORF Green=Tags(s)

 TTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGCAGGACGCGGAGAACGTGGCGGTGCCCGAGGCGGCCGAGGAGCGCGCCGAGCCCGGCCAGCAGCAGC  
 CGGCCCGCGAGCCGCGCCAGCCGAGGGGCTGCTGCGGCCCGCGGGGCCGCGCTCCGAGGCGCGGG  
 GACCGAGGCTCCAGTGAGGAGGTGGGGATCGCGGAGGCCGGGCCGAGCCGAGGTGAGACCGAGCCG  
 GCGGCCGAGGCGAGGCGGCTCCGCGCCGTCCGAGTCGCCCTCGCCGCCGCGCCGAGGAGCTGCCCG  
 GGTGCGATGCTGAGCCCCCTGTCCCGGCACAGGGCGAGGCCCCAGGAGAGCAGGCTCGGGACGAGCGCTC  
 CGACAGCCGGGCCAGGCGGTGTCCGAGGACGCGGGAGGAAACGAGGGCAGAGCGCCGAGGCCGAACCC  
 CGGGCGCTGGAGAATGGCGACGCGGACGAGCCCTCCTTCAGCGACCCGAGGACTTCGTGGACGACGTGA  
 GCGAGGAAGAATTACTGGGAGATGTACTCAAAGATCGGCCCCAGGAAGCAGATGGAATCGATTTCGGTGAT  
 TGTAGTGGACAATGTCCCTCAGGTGGGACCCGACCGACTTGAGAACTCAAAAATGTCATCCACAAGATC  
 TTTTCAAAGTTTGGGAAAATCACAAATGATTTTATCCTGAAGAGGATGGGAAGCAAAAGGGTATATTT  
 TCCTGGAGTACGCGTCCCTGCCACGCTGTGGATGCTGTGAAGAACGCCGACGGCTACAAGCTTGACAA  
 GCAGCACACATTCGGGTCAACCTCTTTACGGATTTTGACAAGTATATGACGATCAGTGACGAGTGGGAT  
 ATTCCAGAGAAACAGCCTTTCAAAGACCTGGGGAACCTTACGTTACTGGCTTGAAGAGGCAGAATGCAGAG  
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 AAAAGACTTTTCTGGTCTCCTGGTGGTAACATAATCGCCTTCTGGGTGCCTGAAGACAAAGATATTCCA  
 GCCAGGGTAACCTGATGCAGCTCCCTACCAGGCAAGAGATCCGAGTGAGGAACCTGTTCAATGTGGTGG  
 ACTGCAAGCTCCATTGGCAGAAGAACGGAGACTACTTGTGTGTGAAAGTAGATAGGACTCCGAAAGGCAC  
 CCAGGGTGTGTACAAATTTTGAATTTTCCGAATGAGGGAGAAACAGGTACCTGTGGATGTGGTCGAG  
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 CAAGCAGCAGGCGAACACCATCTTCTGGAGCCCCCAAGGACAGTTCGTGGTGTGGCGGGCTGAGGAGT  
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 CAGAAAAACGAGCGCCTGGAGTTGCGAGGAGGGTGGACACTGACGAGCTGGACAGCAACGTGGACGACT  
 GGAAGAGGAGACCATTGAGTTCTTCTGTCAGTGAAGAAATCATTCCCCTCGGAATCAGGAG

 AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC200612 protein sequence  
 Red=Cloning site Green=Tags(s)

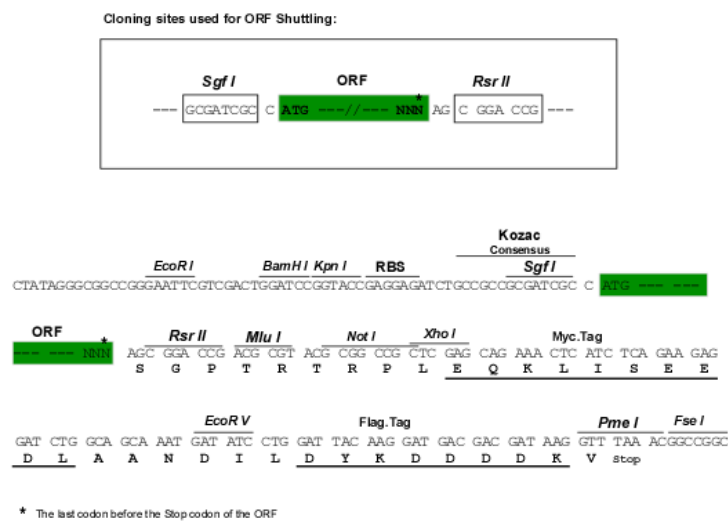
MQDAENVAVPEAAEERAEPGQQQPAAEPPPAEGLLRPAGPGAPEAAGTEASSEEVGIAEAGPEPEVRTEP  
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 RALENGDADEPSFSDPEDFVDDVSEEEELGDVLDKDRPQADGIDSVIVDNPVQVGPDRLEKLNVIHKI  
 FSKFGKITNDFYPEEDGKTKGYIFLEYASPAHAVDAVKNADGYKLDKQHTFRVNLFTDFDKYMTISDEWD  
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 ESSAHWPIFKWSDGKFFARMTLDTLSIYETPSMGLLDKKSLKISGIKDFSWSPGGNIIAFWVPEDKDIP  
 ARVTLMQLPTRQEIRVRNLFNVVDCKLHWQKNGDYLCVKVDRTPKGTQGVVTNFEIFRMREKQVPVDVVE  
 MKETIIIAFAWEPNGSKFAVLHGEAPRISVSFYHVKNNGKIELIKMFDKQQANTIFWSPQGQFVVLAGLRS  
 MNGALAFVDTSDCTVMNIAEHYMASDVEWDPTGRYVVTSSWWSHKVDNAYWLWTFQGRLLQKNNKDRFC  
 QLLWRPRPPTLLSQEQIKQIKDLKKYSKIFEQKDRLSQSKASKELVERRRTMMEDFRKYRKMAQEL YME  
 QKNERLELRGGVDTDELDSNVDDWEEETIEFFVTEETIIPLGNQE

SGPTRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6809\\_a07.zip](https://cdn.origene.com/chromatograms/mk6809_a07.zip)

**Restriction Sites:** Sgfl-RsrII

Cloning Scheme:



ACCN: NM\_001037283

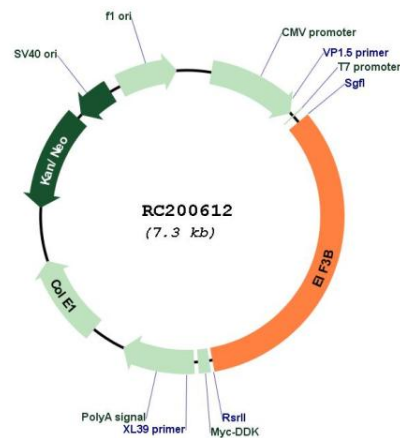
ORF Size: 2442 bp

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OTI Disclaimer:</b>        | <p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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></p> |
| <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>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_001037283.1</a> , <a href="#">NP_001032360.1</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>RefSeq Size:</b>           | 3084 bp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>RefSeq ORF:</b>            | 2445 bp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Locus ID:</b>              | 8662                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>UniProt ID:</b>            | <a href="#">P55884</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Cytogenetics:</b>          | 7p22.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>MW:</b>                    | 92.5 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

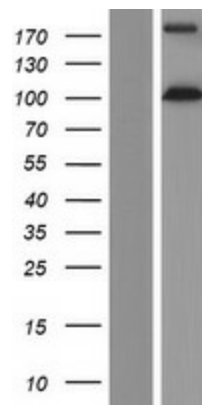
## Gene Summary:

RNA-binding component of the eukaryotic translation initiation factor 3 (eIF-3) complex, which is required for several steps in the initiation of protein synthesis (PubMed:9388245, PubMed:17581632, PubMed:25849773, PubMed:27462815). The eIF-3 complex associates with the 40S ribosome and facilitates the recruitment of eIF-1, eIF-1A, eIF-2:GTP:methionyl-tRNA<sub>i</sub> and eIF-5 to form the 43S pre-initiation complex (43S PIC). The eIF-3 complex stimulates mRNA recruitment to the 43S PIC and scanning of the mRNA for AUG recognition. The eIF-3 complex is also required for disassembly and recycling of post-termination ribosomal complexes and subsequently prevents premature joining of the 40S and 60S ribosomal subunits prior to initiation (PubMed:9388245, PubMed:17581632). The eIF-3 complex specifically targets and initiates translation of a subset of mRNAs involved in cell proliferation, including cell cycling, differentiation and apoptosis, and uses different modes of RNA stem-loop binding to exert either translational activation or repression (PubMed:25849773). [UniProtKB/Swiss-Prot Function]

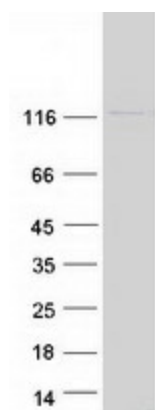
## Product images:



Circular map for RC200612



Western blot validation of overexpression lysate (Cat# [LY418454]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC211093] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified EIF3B protein (Cat# [TP300612]). The protein was produced from HEK293T cells transfected with EIF3B cDNA clone (Cat# RC200612) using MegaTran 2.0 (Cat# [TT210002]).