

## Product datasheet for **RC212420**

### EEF2 (NM\_001961) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	EEF2 (NM_001961) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	EEF2
Synonyms:	EEF-2; EF-2; EF2; SCA26
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide  
Sequence:**

>RC212420 representing NM\_001961  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGTGAACCTTACGGTAGACCAGATCCGCGCCATCATGGACAAGAAGGCCAACATCCGCAACATGTCTG  
 TCATCGCCACCGTGGACCATGGCAAGTCCACGCTGACAGACTCCCTGGTGTGCAAGGCGGGCATCATCGC  
 CTCGGCCCGGGCGGGAGACACGCTTCACTGATACCCGGAAGGACGAGCAGGAGCGTTGCATCACCATC  
 AAGTCAACTGCCATCTCCCTCTTCTACGAGCTCTCGGAGAATGACTTGAACCTTCAAGCAGAGCAAGG  
 ACGGTGCCGGTCTCTCATCAACCTCATTGACTCCCCGGGCATGTCGACTTCTCCTCGGAGGTGACTGC  
 TGCCCTCCGAGTACCGATGGCGCATTGGTGGTGGTGGACTGCGTGTGAGCGTGTGCGTGCAGACGGAG  
 ACAGTGTGCGGACGGCCATTGCCGAGCGCATCAAGCCTGTGCTGATGATGAACAAGATGGACCGCGCCC  
 TGCTGGAGCTGCAGCTGGAGCCGAGGAGCTCTACCAGACTTCCAGCGCATCGTGGAGAACGTGAACGT  
 CATCATCTCCACCTACGGCGAGGGCGAGAGCGGCCCATGGGCAACATCATGATCGATCCTGTCCCTCGGT  
 ACCGTGGGCTTTGGGTCTGGCCTCCACGGTGGGCCTTACCCTGAAGCAGTTTGCAGAGATGATGTGG  
 CCAAGTTCGCGCCAAGGGGAGGGCCAGTTGGGGCTGCCGAGCGGGCAAGAAAGTAGAGGACATGAT  
 GAAGAAGCTGTGGGTGACAGGACTTTGACCCAGCCAACGGCAAGTTCAGCAAGTCAAGCCACGAGCCCC  
 GAAGGGAAGAAGCTGCCACGCACCTTCTGCCAGCTGATCCTGGACCCCATCTTCAAGGTGTTTATGCGA  
 TCATGAATTTCAAGAAAGAGGAGACAGCAAACTGATAGAGAACTGGACATCAAAGTGGACAGCGAGGA  
 CAAGGACAAAGAAGGCAAACCCCTGCTGAAGGCTGTGATGCGCCGCTGGTGCCTGCCGGAGACGCTTG  
 TTGCAGATGATCACCATCCACTGCCCTCCCCTGTGACGGCCAGAAGTACCCTGCGAGCTCCTGTACG  
 AGGGCCCCCGGACGACGAGGCTGCCATGGCATTAAAAGCTGTGACCCAAAGGCCCTTATGATGTA  
 TATTTCCAAAATGGTGCCAACTCCGACAAAGGTCGGTTCTACGCCTTTGGACGAGTCTTCTCGGGGCTG  
 GTCTCCACTGGCCTGAAGGTCAGGATCATGGGGCCCAACTATAACCCTGGGAAGAAGGAGGACCTTACC  
 TGAAGCCAATCCAGAGAACAATCTTGTGATGGGCGCTACGTGGAGCCCATCGAGGATGTGCCTTGTGG  
 GAACATTTGGGCTCGTGGGCTGGACAGTTCCTGGTGAAGACGGGACCCATCACCACCTTCGAGCAC  
 GCGCACAACATGCGGGTGTGAAGTTCAGCGTCAGCCCTGTTGTCAGAGTGGCCGTGGAGGCCAAGAACC  
 CGGCTGACCTGCCAAGCTGGTGGAGGGGCTGAAGCGGCTGGCCAAGTCCGACCCATGGTGCAGTGCAT  
 CATCGAGGAGTCGGGAGAGCACATCATCGGGGCGCGGCGAGCTGCACCTGGAGATCTGCCTGAAGGAC  
 CTGGAGGAGGACCAGCCTGCATCCCCATCAAGAAATCTGACCCGGTCTGCTCGTACCGGAGACGGTCA  
 GTGAAGAGTCGAACGTGCTCTGCCTCTCCAAGTCCCCAACAAGCACAACCGGCTGTACATGAAGGCGCG  
 GCCCTTCCCCGACGGCCTGGCCGAGGACATCGATAAAGGCGAGGTGTCCGCCCTCAGGAGCTCAAGCAG  
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 CGTTTCGACGTCCACGACGTACCCTGCACGCCAGCCATCCACCGGAGGGGGCCAGATCATCCCCA  
 CAGCACGGCGCTGCCTCTACGCCAGTGTCTGACCGCCAGCCACGCCTCATGGAGCCATCTACCTTGT  
 GGAGATCCAGTGTCCAGAGCAGGTGGTGGTGGCATCTACGGGTTTTGAACAGGAAGCGGGCCACGTG  
 TTCGAGGAGTCCCAGGTGGCCGGCACCCCATGTTTGTGGTCAAGGCCTATCTGCCCGTCAACGAGTCT  
 TTGGCTTACCGCTGACCTGAGGTCCAACAGGGCGGCCAGGCGTTCCCCAGTGTGTGTTTGACCACTG  
 GCAGATCCTGCCCGAGACCCCTTCGACAACAGCAGCCGCCAGCCAGGTGGTGGCGGAGACCCGCAAG  
 CGCAAGGGCTGAAGAAGGCATCCCTGCCCTGGACAACCTCTGGACAAATTG

**ACGGT**ACGGGCGGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC212420 representing NM\_001961  
Red=Cloning site Green=Tags(s)

MVNFTVDQIRAIMDKKANIRNMSVIAHVDHGKSTLTDSL VCKAGIIASARAGETRFTDRKDEQERCITI  
 KSTAI SLFYELSENDFIKQSKDGAGFLINLIDSPGHVDFSSEVTAALRVTDGALVVVDCVSGVCVQTE  
 TVLRQAI AERIKPVLMMNKMDRALLELQLEPEELYQTFQRIVENVNVIIISTYGEGESGPMGNIMIDPVLG  
 TVGFGSGLHGWAFTLKQFAEMYVAKFAAKGEGQLGPAERAKKVEDMMKKLWGDYFDPANGKF SKSATSP  
 EGKKLPRTF CQLIDPIFKVFDAIMNFKKEETAKLIEKLDIKL DSEDKDKEGKPLLKAVMRRWLPAGDAL  
 LQMITIHL PSPVTAQKYRCELL YEGPPDEAAMGIKSCDPKGPLMMYISKMVPTSDKGRFYAFGRVFSGL  
 VSTGLKVRIMGPNYTPGKKEDLYLKPIQRTILMMGRYVEPIEDVPCGNIVGLVGVQDFLVKTGTITTFEH  
 AHNMRVMKFSVSPVVRVAEAKNPADLPKLVEGLKRLAKSDPMVQCIIEESGEHI IAGAGELHLEICLKD  
 LEEDHACIPIKSDPVVSYRET VSESNVLCLSKSPNKHNL YMKARPPDGLAEDIDKGEVSARQELKQ  
 RARYLAEKYEWDAEARKIWCFGPDGTGNILTDITKGVQYLNEIKDSV VAGFQWATKEGALCEENMRGV  
 RFDVHDVTLHADAIHRGGGQI IPTARRCLYASVLT AQPRLMEPIYLVEIQCP EQVVGGIYVGLNRKRGHV  
 FEESQVAGTPMFVVKAYLPVNESFGFTADLR SNTGGQAF PQCVFDHWQILPGDPFDNSSRPSQVVAETRK  
 RKGLKEGIPALDNFLDKL

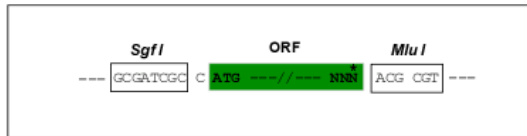
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg3672\\_b05.zip](https://cdn.origene.com/chromatograms/mg3672_b05.zip)

**Restriction Sites:** SgfI-MluI

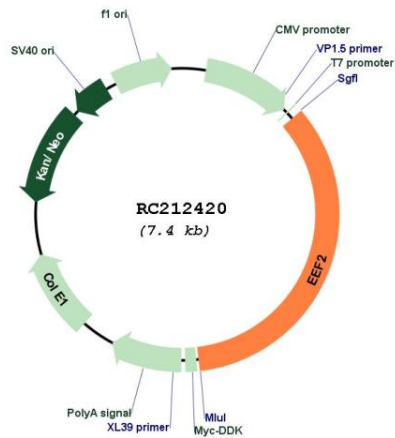
**Cloning Scheme:**

Cloning sites used for ORF Shuttling:

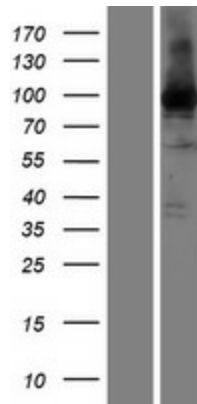


\* The last codon before the Stop codon of the ORF

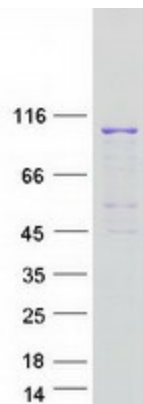
<b>ACCN:</b>	NM_001961
<b>ORF Size:</b>	2574 bp
<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability 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>RefSeq:</b>	<a href="#">NM_001961.2</a> , <a href="#">NP_001952.1</a>
<b>RefSeq Size:</b>	3148 bp
<b>RefSeq ORF:</b>	2577 bp
<b>Locus ID:</b>	1938
<b>UniProt ID:</b>	<a href="#">P13639</a>
<b>Cytogenetics:</b>	19p13.3
<b>Domains:</b>	EFG_C, GTP_EFTU, GTP_EFTU_D2, EFG_IV
<b>MW:</b>	95.2 kDa
<b>Gene Summary:</b>	This gene encodes a member of the GTP-binding translation elongation factor family. This protein is an essential factor for protein synthesis. It promotes the GTP-dependent translocation of the nascent protein chain from the A-site to the P-site of the ribosome. This protein is completely inactivated by EF-2 kinase phosphorylation. [provided by RefSeq, Jul 2008]

**Product images:**


Circular map for RC212420



Western blot validation of overexpression lysate (Cat# [LY419622]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212420 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified EEF2 protein (Cat# [TP312420]). The protein was produced from HEK293T cells transfected with EEF2 cDNA clone (Cat# RC212420) using MegaTran 2.0 (Cat# [TT210002]).