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# Product datasheet for MR211654

## Eif2ak3 (NM_010121) Mouse Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Eif2ak3 (NM_010121) Mouse Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | Eif2ak3 |
| **Synonyms:** | PE; Pek; Perk |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>MR211654 representing NM_010121
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGCGCGCCACCCGGCCCGGGCCGCGCGCGCTGCTGCTGCTTCTGTTCCTGCTGCTGGGCTGCGCGG
CGGGGATCTCGGCGGTCGCGCCCGCCCGCAGTTTGCTTGCTCCCGCGTCGGAGACAGTGTTTGGCTTAGG
GGCAGCGGCCGCCCCGACTTCGGCCGCGCGGGTGCCTGCGGTGGCAACGGCCGAAGTGACCGTGGAGGAC
GCCGAGGCATTGCCGGCTGCCGCTGGCGAACCGGAGTCACGCGCGACGGAGCCCGATGACGACGTGGAAC
TGCGGCCTCGCGGCAGGTCCTTGGTAATCATCAGCACTTTAGATGGACGAATCGCTGCACTGGATGCCGA
GAATGATGGGAAAAAGCAGTGGGATTTGGACGTGGGGTCTGGTTCCTTGGTTTCATCTAGCCTCAGCAAG
CCAGAGGTGTTTGGGAACAAGATGATCATCCCCTCCCTGGATGGAGACCTCTTCCAGTGGGACCGGGACC
GAGAGAGCATGGAGGCCGTCCCCTTCACGGTGGAGTCCCTGCTCGAATCTTCCTACAAGTTTGGAGATGA
TGTTGTTCTGGTTGGAGGGAAATCTCTGACTACATACGGACTCAGTGCTTACAGTGGAAAGCTGAGGTAT
ATCTGTTCTGCCTTGGGATGTCGCCGATGGGATAGTGATGAAATGGAAGAAGAGGAAGACATCTTGCTTC
TGCAGCGTACGCAGAAGACTGTGCGAGCTGTCGGGCCTCGAAGCGGCAGTGAGAAGTGGAATTTCAGTGT
TGGCCACTTTGAACTTCGGTATATTCCAGACATGGAAACTAGAGCCGGATTCATTGAAAGCACCTTTAAA
CCGGGTGGAAACAAAGAAGACTCTAAAATTATTTCAGATGTGGAAGAACAAGAAGCCACCATGCTGGACA
CAGTGATAAAAGTTTCCGTTGCTGATTGGAAGGTCATGGCGTTTAGTAGGAAGGGAGGCCGCCTGGAATG
GGAGTACCAGTTTTGTACTCCCATCGCGTCCGCCTGGCTGGTGAGGGATGGCAAGGTCATCCCCATCAGC
CTGTTTGATGATACAAGTTACACAGCCAGCGAAGAAGCCTTGGGAGACGAAGAAGACATTGTAGAGGCTG
CTCGGGGAGCCACAGAGAACAGCGTGTACTTAGGGATGTACAGAGGCCAGCTGTACCTGCAGTCGTCCGT
CAGGGTCTCAGAAAAGTTCCCTACAAGCCCAAAGGCCTTGGAGTCTGTAAATGGCGAAAATGCAATTATT
CCTCTGCCGACGATCAAATGGAAGCCCTTAATCCATTCTCCTTCTAGGACTCCTGTCTTGGTTGGGTCTG
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CCTCCAGTATCCATACGATAACGGTTACTATCTGCCATACTACAAGAGAGAAAGGAATAAGCGGAGCACG

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CAGATCACAGTCAGGTTCCTGGACAGCCCCCACTACAGCAAGAACATCCGCAAGAAGGACCCTATCCTCC
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GATATCTAACAGATTTTGAGCCAATTCAGTGCATGGGTCGTGGTGGCTTTGGCGTTGTCTTTGAAGCTAA
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AAGGTAATGCGGGAAGTTAAAGCCTTGGCTAAGCTGGAACACCCAGGCATTGTGAGGTATTTCAACGCCT
GGCTGGAAACCCCACCAGAGAAGTGGCAAGAAGAGATGGATGAGATCTGGCTCAAAGACGAAAGCACAGA
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AGCAGCAGGTCTTCTTCAGAAGCCACCACCTTGTCTACCTCCCCTACCAGGCCAACCACTCTAAGCTTGG
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GGGACCTCAAGCCTTCCAACATATTCTTCACAATGGATGATGTGGTCAAGGTTGGGGACTTTGGACTGGT
GACTGCTATGGACCAAGATGAAGAAGAGCAGACTGTACTGACTCCAATGCCAGCCTATGCTACGCACACG
GGACAAGTAGGGACCAAGCTATACATGAGCCCAGAGCAGATTCATGGAAACAACTACTCCCATAAAGTGG
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ATGGTTCAAGACATGCTCTCTCCATCCCCCACGGAGCGGCCTGAAGCCACAGACATCATTGAAAATGCCA
TATTTGAGAACTTGGAGTTTCCCGGGAAAACGGTTCTGAGACAGCGGTCCCGCTCCATGAGTTCATCTGG
AACAAAACATTCCAGACAGCCCAGCTGCTCGTACAGCCCACTGCCTGGCAAC

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR211654 representing NM_010121
Red=Cloning site Green=Tags(s)

MERATRPGPRALLLLLFLLLGCAAGISAVAPARSLLAPASETVFGLGAAAAPTSAARVPAVATAEVTVED
AEALPAAAGEPESRATEPDDDVELRPRGRSLVIISTLDGRIAALDAENDGKKQWDLDVGSGSLVSSSLSK
PEVFGNKMIIPSLDGDLFQWDRDRESMEAVPFTVESLLESSYKFGDDVVLVGGKSLTTYGLSAYSGKLRY
ICSALGCRRWDSDEMEEEEDILLLQRTQKTVRAVGPRSGSEKWNFSVGHFELRYIPDMETRAGFIESTFK
PGGNKEDSKIISDVEEQEATMLDTVIKVSVADWKVMAFSRKGGRLEWEYQFCTPIASAWLVRDGKVIPIS
LFDDTSYTASEEALGDEEDIVEAARGATENSVYLGMYRGQLYLQSSVRVSEKFPTSPKALESVNGENAII
PLPTIKWKPLIHSPSRTPVLVGSDEFDKCLSNDKYSHEEYSNGALSILQYPYDNGYYLPYYKRERNKRST
QITVRFLDSPHYSKNIRKKDPILLLHWWKEIFGTILLCIVATTFIVRRLFHPQPHRQRKESETQCQTESK
YDSVSADVSDNSWNDMKYSGYVSRYLTDFEPIQCMGRGGFGVVFEAKNKVDDCNYAIKRIRLPNRELARE
KVMREVKALAKLEHPGIVRYFNAWLETPPEKWQEEMDEIWLKDESTDWPLSSPSPMDAPSVKIRRMDPFS
TKEQIEVIAPSPERSRSFSVGISCGQTSSSESQFSPLEFSGTDCGDNSDSADAAYNLQDSCLTDCEDVED
GTVDGNDEGHSFELCPSEASPYTRSREGTSSSIVFEDSGCGNASSKEEPRGNRLHDGNHYVNKLTDLKCS
SSRSSSEATTLSTSPTRPTTLSLDFTKNTVGQLQPSSPKVYLYIQMQLCRKENLKDWMNRRCSLEDREHG
VCLHIFLQIAEAVEFLHSKGLMHRDLKPSNIFFTMDDVVKVGDFGLVTAMDQDEEEQTVLTPMPAYATHT
GQVGTKLYMSPEQIHGNNYSHKVDIFSLGLILFELLYPFSTLMERVRILTDVRNLKFPLLFTQKYPQEHM
MVQDMLSPSPTERPEATDIIENAIFENLEFPGKTVLRQRSRSMSSSGTKHSRQPSCSYSPLPGN

SGPTRTRRLEQKLISEEDLAANDILDYKDDDDKV

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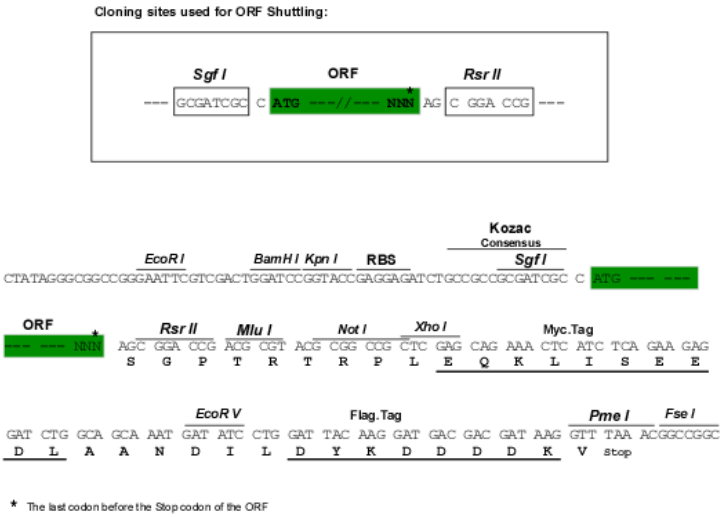
**Restriction Sites:** SgfI-RsrII

**Cloning Scheme:**




**ACCN:** NM_010121

**ORF Size:** 3342 bp

**OTI Disclaimer:** 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.

**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:**
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:** NM_010121.1, NM_010121.2, NM_010121.3, NP_034251.2

**RefSeq Size:** 4512 bp

**RefSeq ORF:** 3345 bp

**Locus ID:** 13666

**Cytogenetics:** 6 C1

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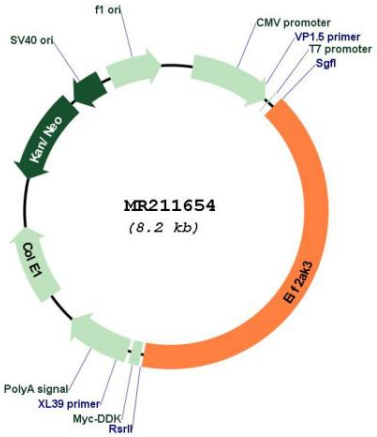
**MW:** 125.1 kDa

**Gene Summary:** The protein encoded by this gene phosphorylates the alpha subunit of eukaryotic translation-initiation factor 2, leading to its inactivation, and thus to a rapid reduction of translational initiation and repression of global protein synthesis. This protein is thought to modulate mitochondrial function. It is a type I membrane protein located in the endoplasmic reticulum (ER), where it is induced by ER stress caused by malfolded proteins. Mutations in a similar gene in human are associated with Wolcott-Rallison syndrome. [provided by RefSeq, Sep 2015]

## Product images:




Circular map for MR211654

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